

# Online Appendix

Please note that per the Editors' instructions to us regarding the APSR Online Appendix page limit guidelines, some content in the Online Appendix was moved to a supplementary Dataverse Online Appendix. Appendix sections, figures, and tables beginning with DA (e.g., section DA1, Table DA4, etc.) can be found in the Dataverse Online Appendix on Dataverse.

## A Appendix: preregistered analyses

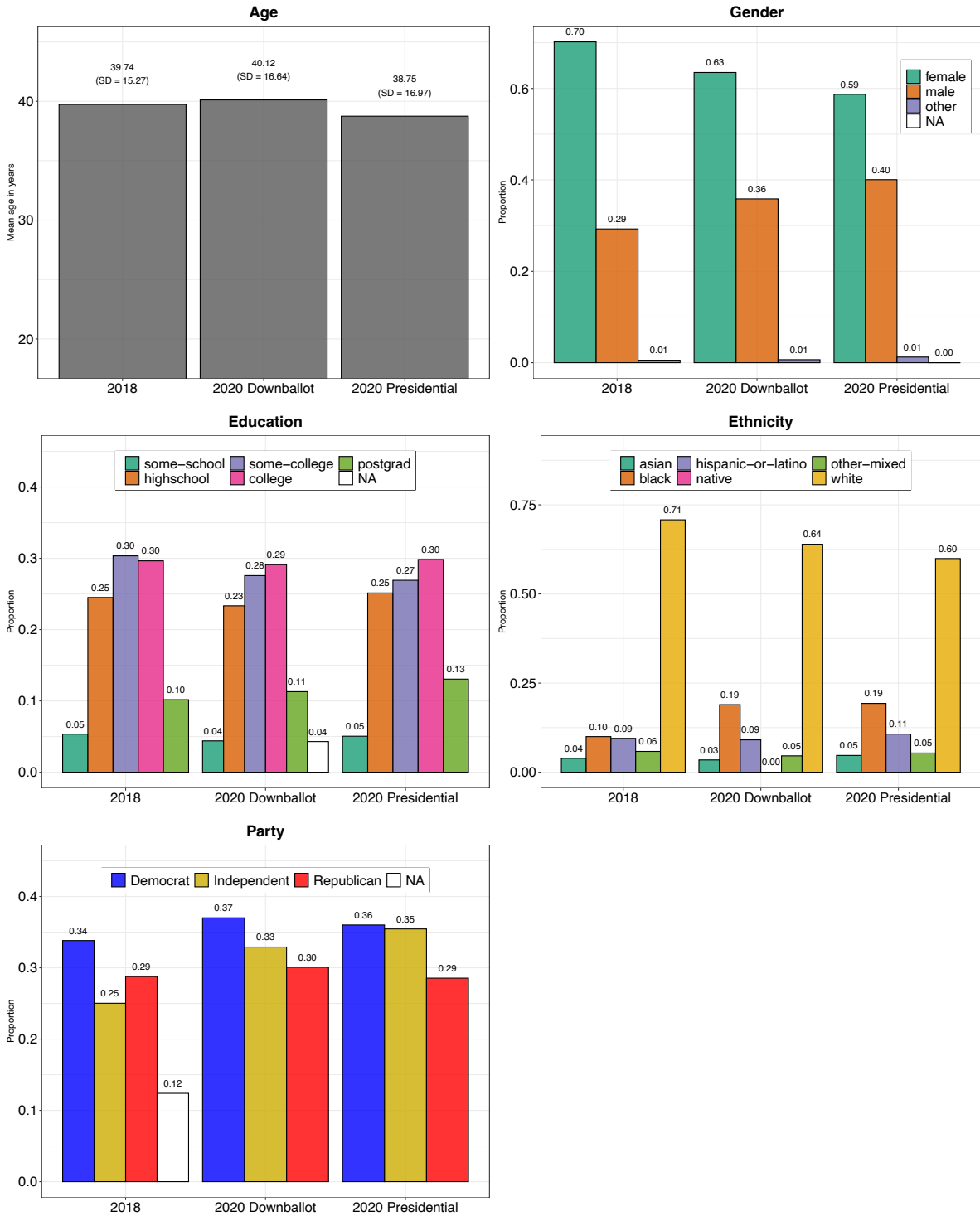
### A.1 Demographics

The pretreatment covariates were measured with these questions:

- What is your year of birth?
- What is your gender (*dummy coded: Male/Female/Other*)
- What race or ethnic group do you most identify with? (*dummy coded: White, Black, Asian, Hispanic/Latino, Other/mixed*)
- What is your educational background? (*dummy coded: Some School/No Diploma, High School Graduate, Some College, College Degree, Postgraduate Degree*)
- In terms of politics, do you consider yourself a Democrat, independent, or Republican? (*0-10*)
- On a scale from very liberal to very conservative, how would you best describe your political views? (*0-10*)
- Do you approve or disapprove of the way Donald Trump is handling his job as President? (*0-10*)

A summary of the major demographic covariates is described in Figure [OAI](#).

**Figure OA1: Respondent demographics.**



## A.2 Metaregression coefficient plots

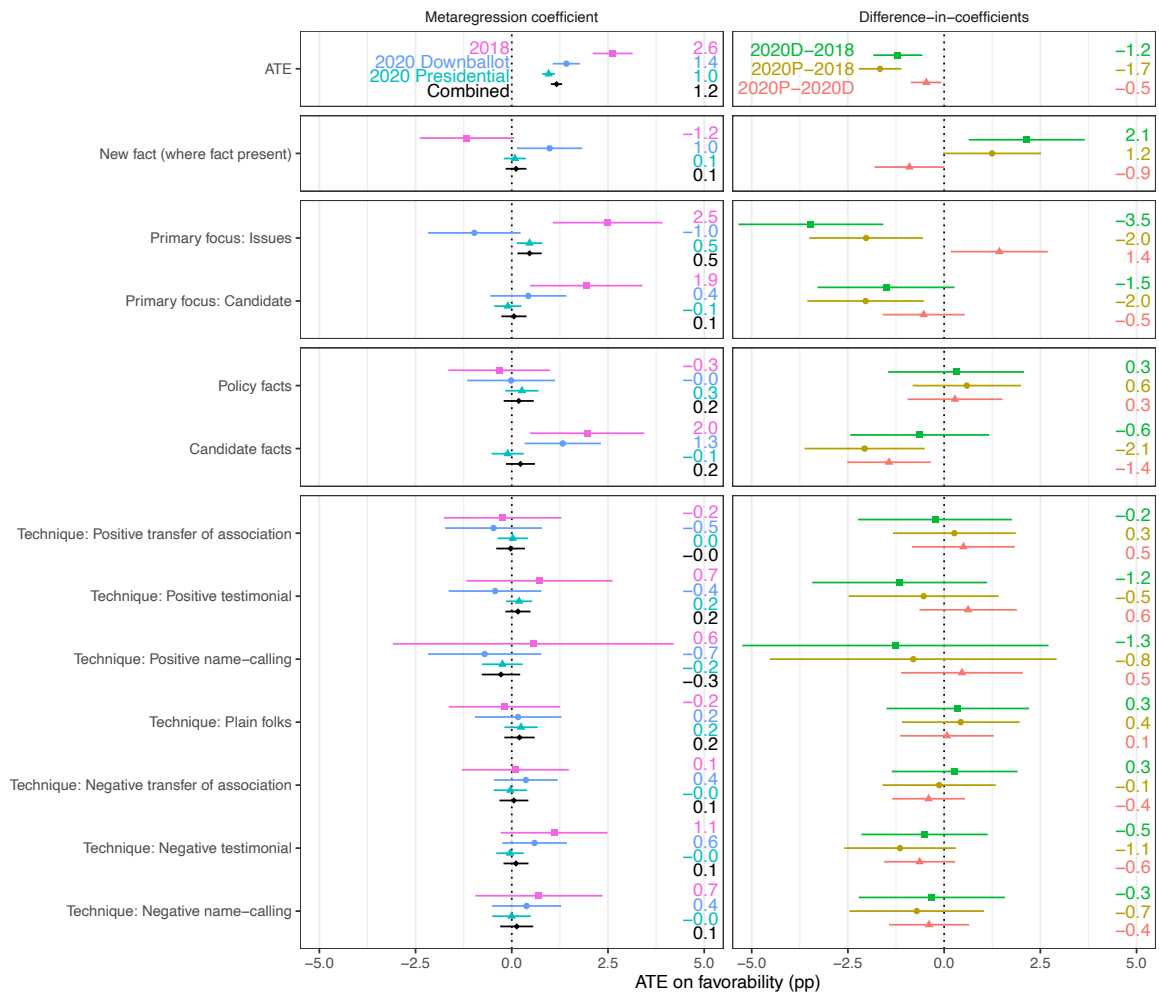
In this section, we provide coefficient plots that correspond to the t-statistics reported in Figure 3.

Figure OA2 shows that, in 2020, ads that had policy issues or the candidates themselves as the primary focus did better than ads that did not on the favorability outcome. However, this pattern was not replicated in the 2020 data. Mentions of candidate facts were associated with stronger effects in 2018 and in the 2020 downballot races, but not in the Presidential race. None of the rhetorical techniques we thought might be important – positive transfer of association, positive testimonial, etc – seem to generate larger or smaller persuasive effects. Figure OA3 shows that with few exceptions, the same patterns hold for the vote choice outcome.

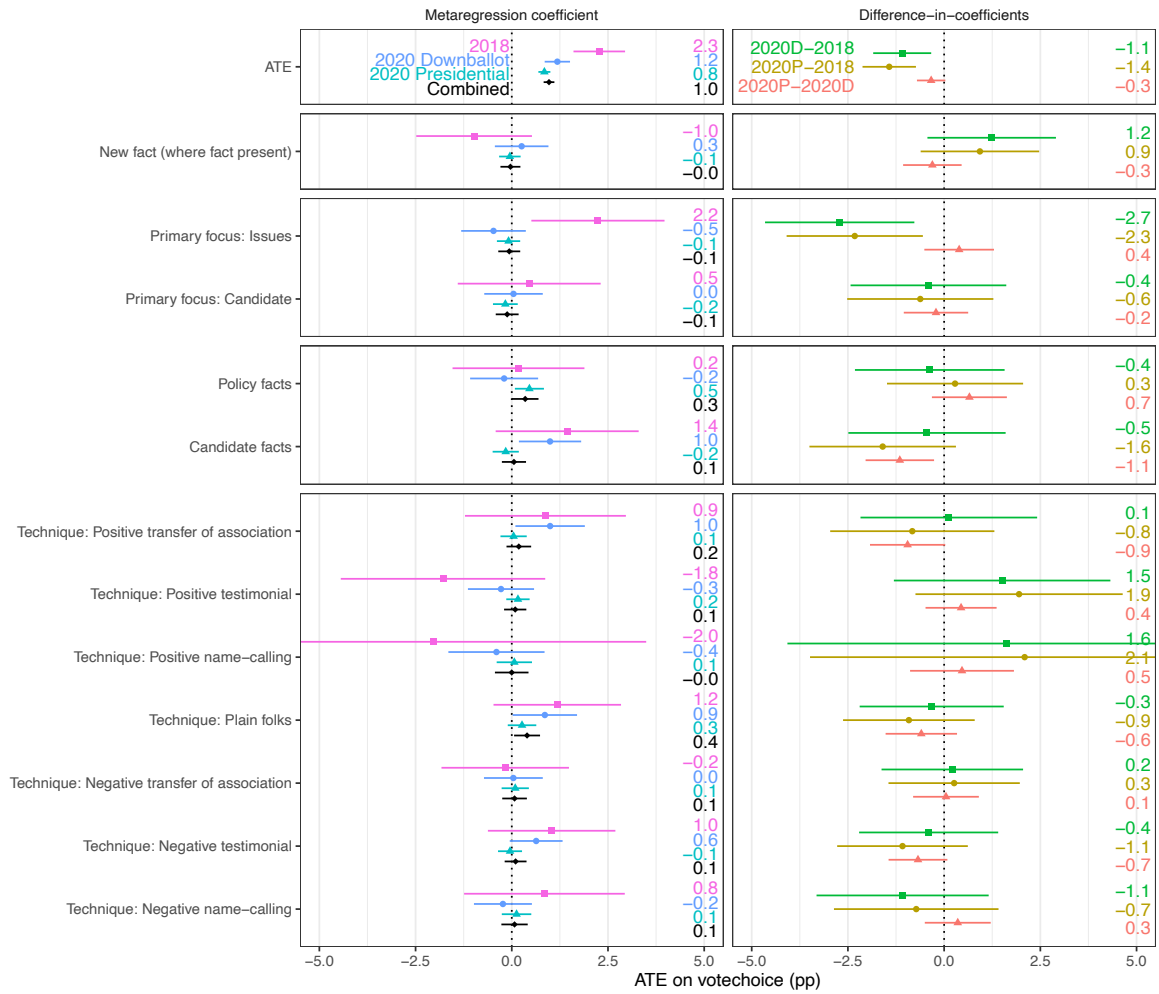
Figures OA4 and OA5 show the results for the secondary outcomes. Production value, the messenger being a politician or not, the ad mentioning a new fact, containing an explicit ask for a vote, deploying the emotion of anger, or using a particular town—none of these are consistently associated with higher treatment effects.

Finally, Figures OA6 and OA7 report the estimates from new hypotheses we introduced in the 2020 PAP. Here again we see a similar story: small, inconsistent differences depending on the messenger of the ad or the issue mentioned.

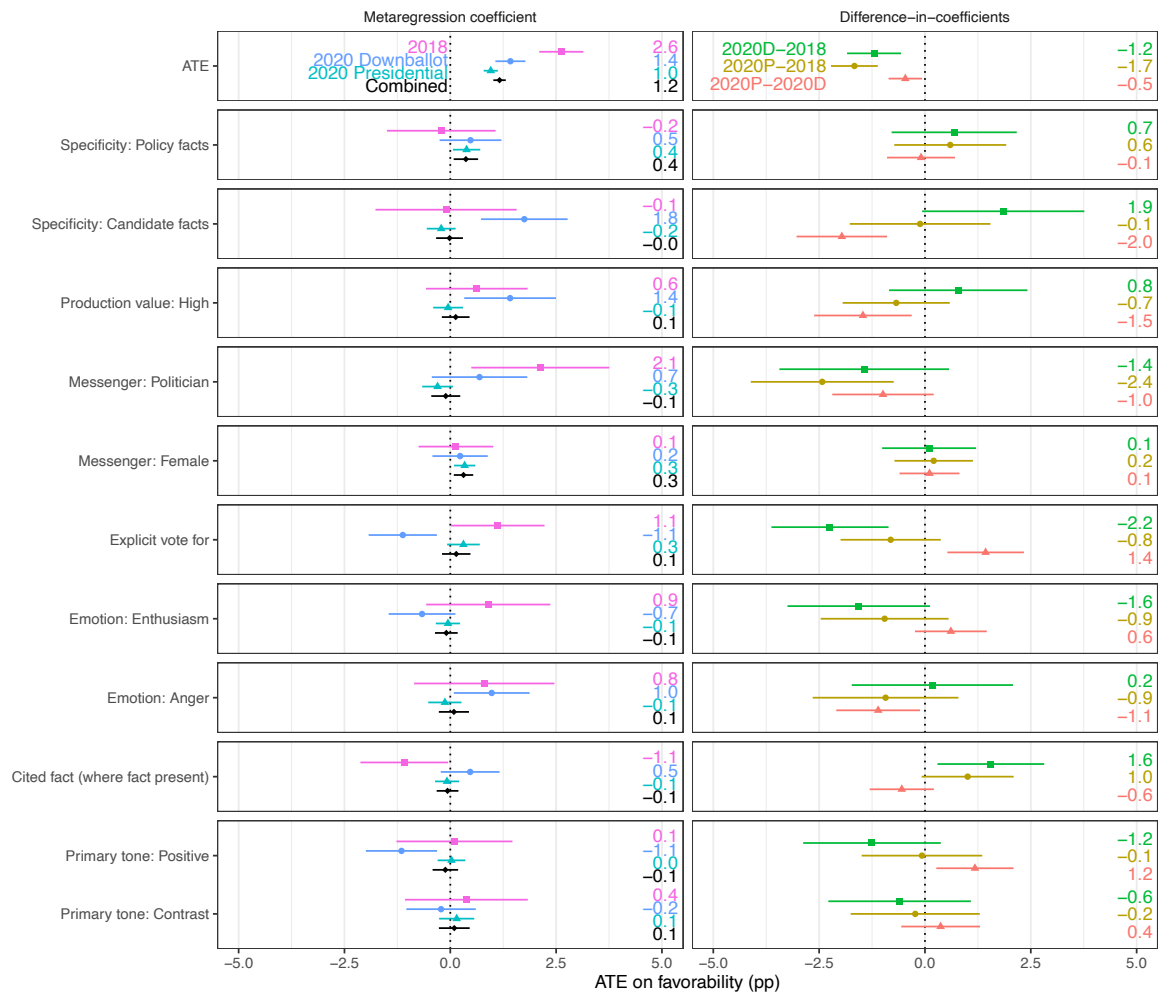
**Figure OA2: Primary metaregressions for favorability outcome**



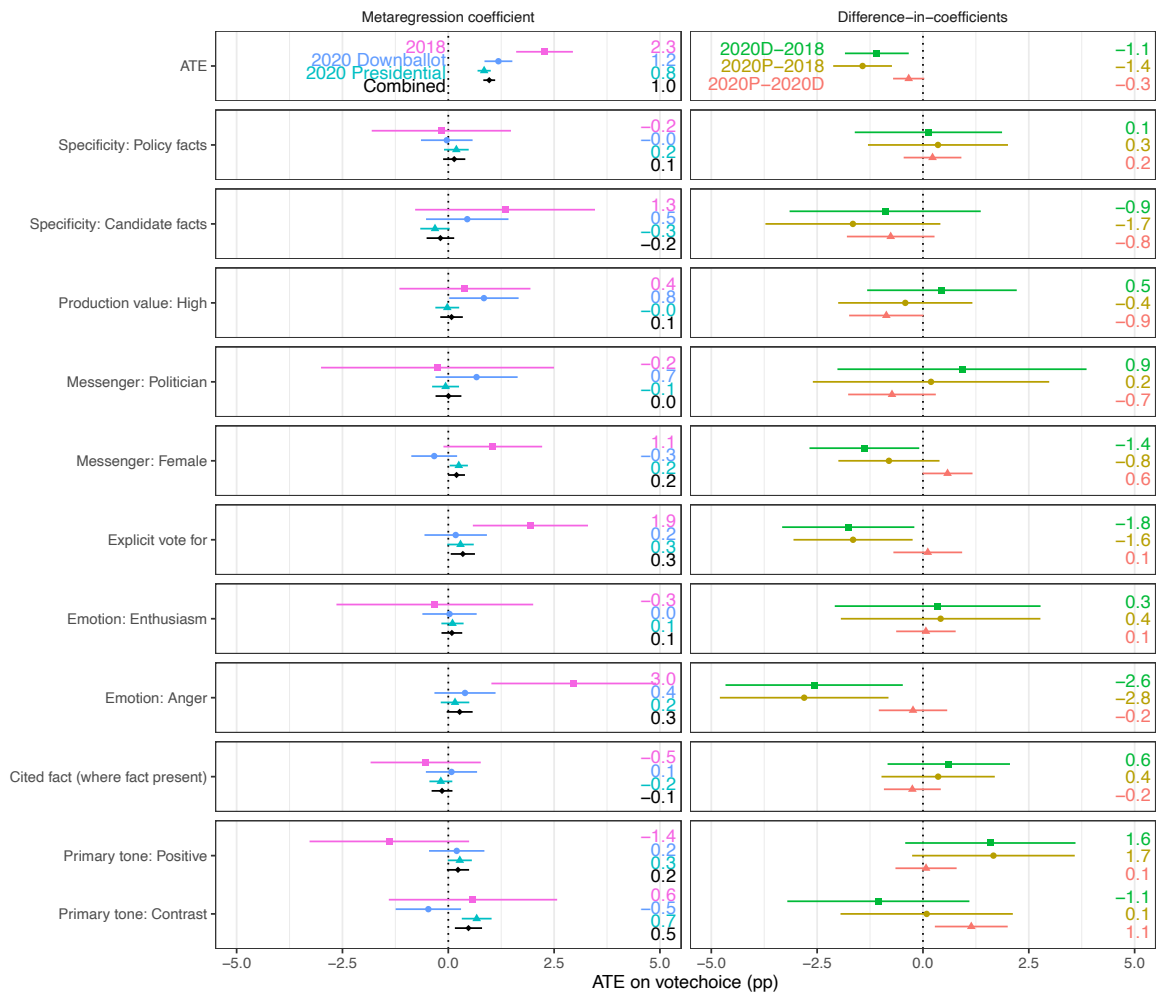
**Figure OA3: Primary metaregressions for votechoice outcome**



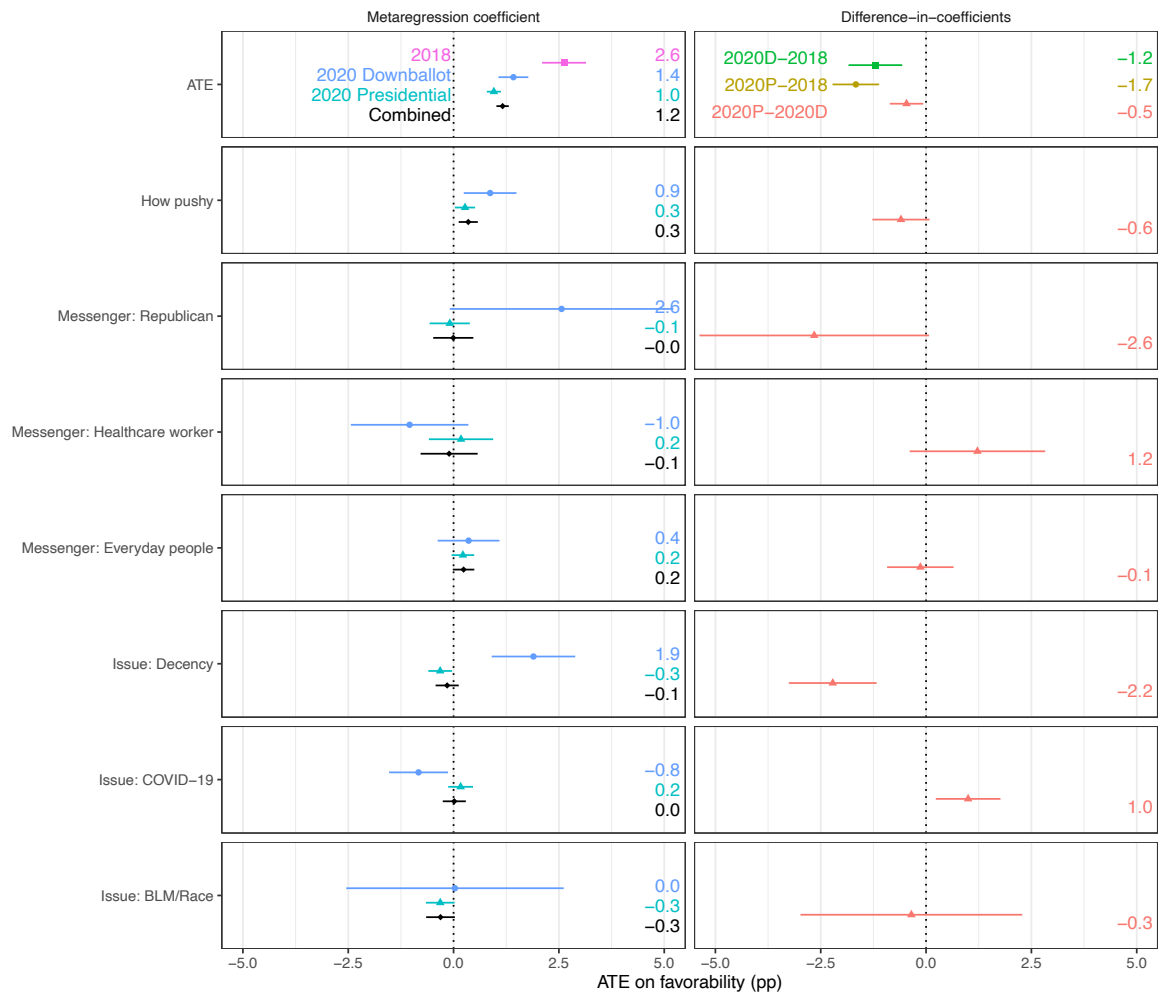
**Figure OA4: Secondary metaregressions for favorability outcome**



**Figure OA5: Secondary metaregressions for votechoice outcome**

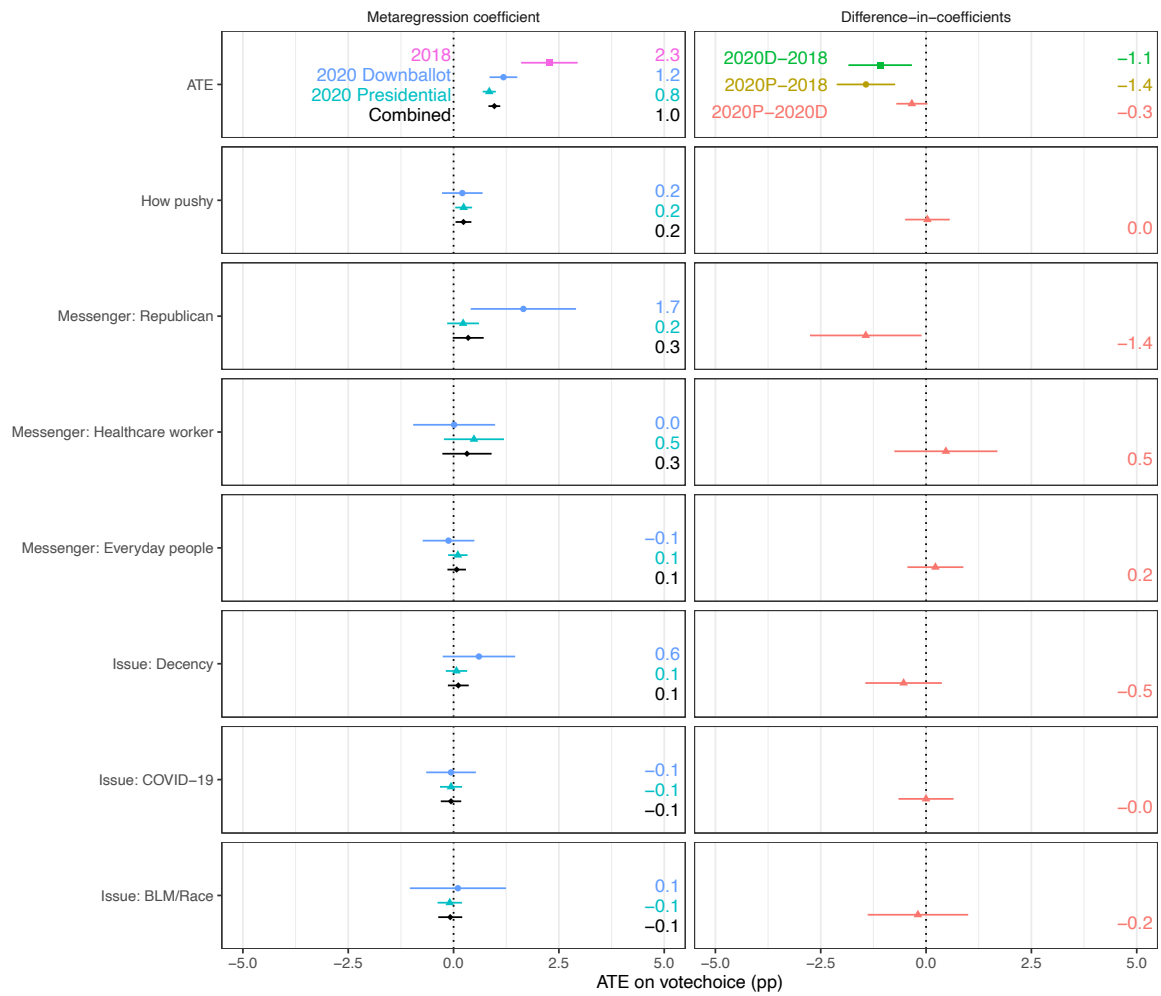


**Figure OA6: New metaregressions for favorability outcome**



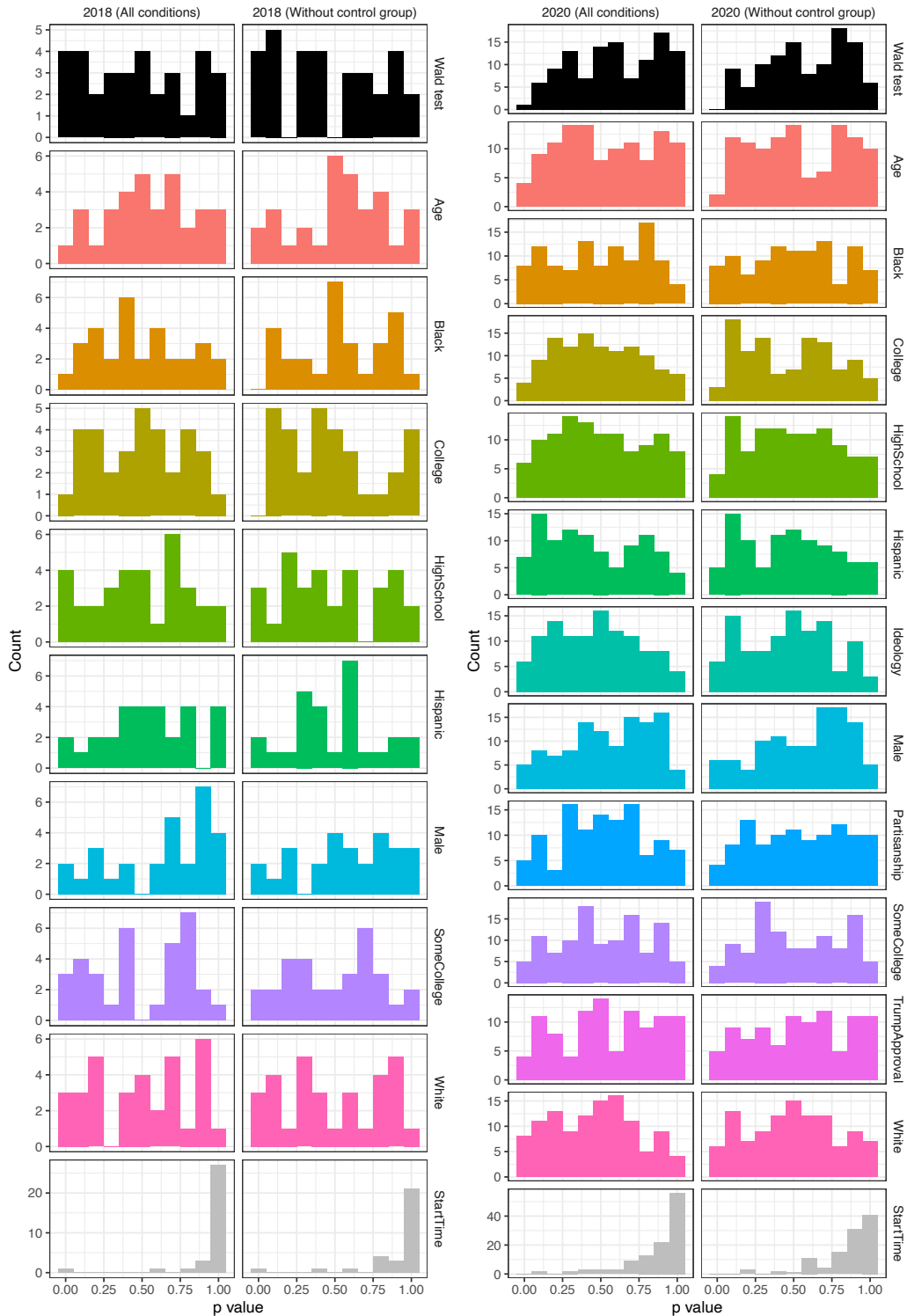


**Figure OA7: New metaregressions for votechoice outcome**



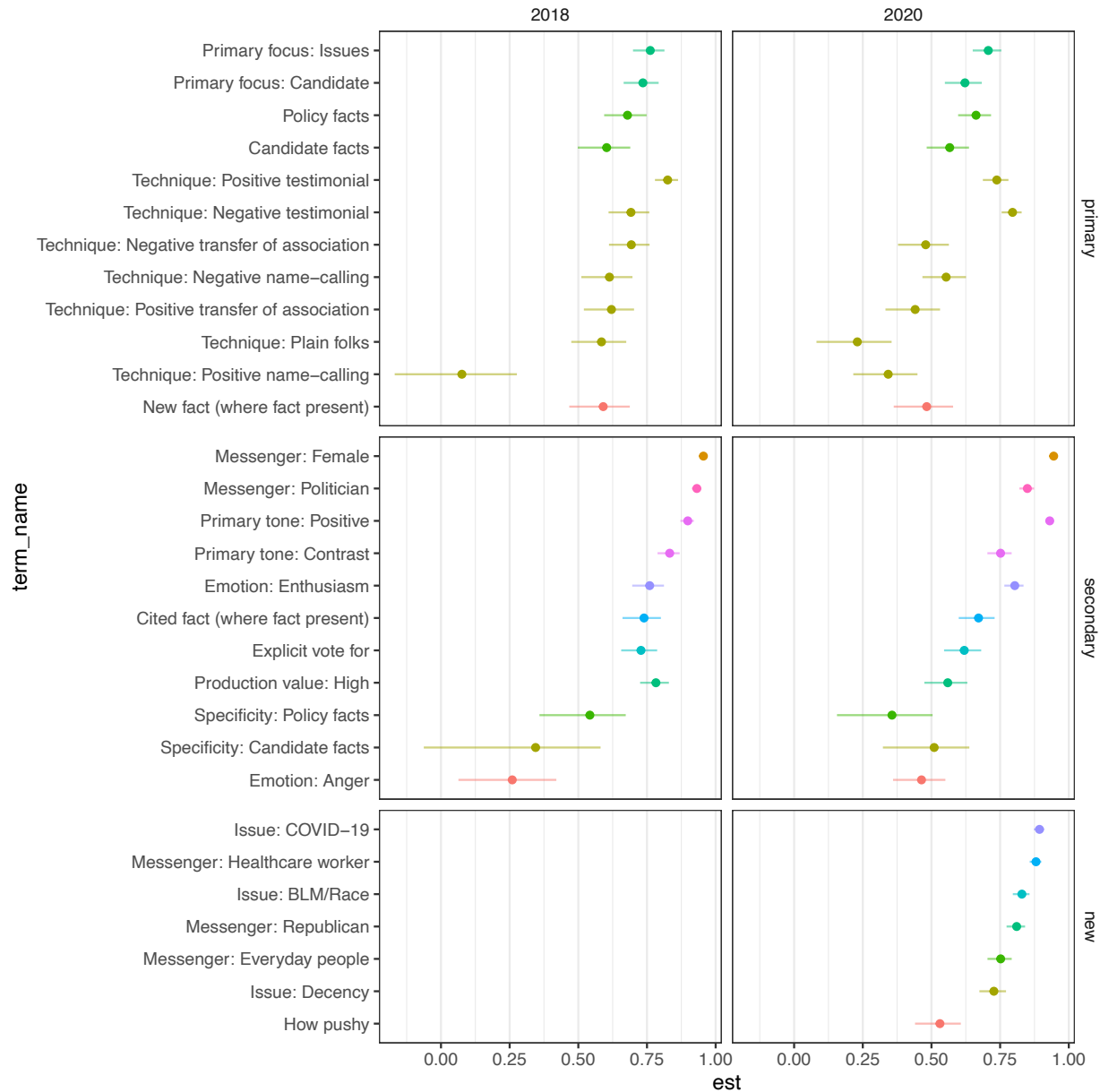
### A.3 Balance checks

**Figure OA8:** Balance checks for all studies analysed. Variables are measured post-treatment in 2018 data, and pre-treatment in 2020 data.



## A.4 Reliability

**Figure OA9:** Reliability of ratings for all video features used in the analysis. This plot shows the estimated consistency of the  $k$ -rater average measure for each item,  $ICC(C, k)$ , using  $k = 3$  ratings per video in 2018 and  $k = 2$  ratings per video in 2020.



**Figure OA10:** Metaregression  $t$ -statistics matrix, arranged by reliability ( $ICC(C, k)$ ) among 2020 raters.

	Favorability			Vote choice			
	2018	2020 Downballot	2020 Presidential	2018	2020 Downballot	2020 Presidential	
<b>High reliability</b>	Emotion: Enthusiasm	1.21	-1.68	-0.38	-0.27	0.09	0.74
	Issue: BLM/Race		0.02	-1.84		0.18	-0.62
	Issue: COVID-19		-2.35*	1.12		-0.20	-0.46
	Messenger: Everyday people		0.96	1.63		-0.39	0.86
	Messenger: Female	0.30	0.70	2.66**	1.79	-1.21	2.27*
	Messenger: Healthcare worker		-1.48	0.46		0.03	1.33
	Messenger: Politician	2.58*	1.21	-1.64	-0.18	1.36	-0.39
	Messenger: Republican		1.91	-0.37		2.62**	1.18
	Primary tone: Contrast	0.52	-0.53	0.72	0.58	-1.20	3.75**
	Primary tone: Positive	0.14	-2.71**	0.17	-1.47	0.60	1.89
Technique: Negative testimonial	1.57	1.39	-0.25	1.24	1.82	-0.29	
<b>Medium reliability</b>	Candidate facts	2.61*	2.65**	-0.51	1.54	2.43*	-0.91
	Cited fact (where fact present)	-2.07*	1.34	-0.54	-0.82	0.25	-1.28
	Explicit vote for	2.01*	-2.75**	1.59	2.83**	0.47	1.82
	How pushy		2.74**	2.24*		0.85	2.35*
	Issue: Decency		3.78**	-2.23*		1.38	0.54
	Policy facts	-0.49	-0.03	1.20	0.20	-0.44	2.39*
	Primary focus: Candidate	2.63**	0.86	-0.57	0.48	0.12	-1.02
	Primary focus: Issues	3.46**	-1.60	2.75**	2.57*	-1.12	-0.55
	Production value: High	1.03	2.58*	-0.29	0.50	2.03*	-0.17
	Specificity: Candidate facts	-0.12	3.45**	-1.26	1.32	0.92	-1.79
Technique: Negative name-calling	0.84	0.85	-0.02	0.81	-0.60	0.64	
Technique: Positive testimonial	0.75	-0.71	1.11	-1.34	-0.64	1.04	
<b>Low reliability</b>	Emotion: Anger	0.96	2.16*	-0.64	3.02**	1.08	0.93
	New fact (where fact present)	-1.88	2.29*	0.55	-1.29	0.73	-0.35
	Specificity: Policy facts	-0.33	1.30	2.38*	-0.20	-0.12	1.29
	Technique: Negative transfer of association	0.13	0.88	-0.16	-0.20	0.11	0.50
	Technique: Plain folks	-0.26	0.29	1.10	1.42	2.03*	1.41
	Technique: Positive name-calling	0.30	-0.95	-0.91	-0.73	-0.63	0.28
Technique: Positive transfer of association	-0.31	-0.75	0.14	0.83	2.18*	0.27	

Notes: Notes: Low:  $ICC < 0.5$ . Medium:  $0.5 < ICC < 0.75$ . High:  $ICC > 0.75$ . Each row corresponds with one hypothesis and each column corresponds with one dataset. The cells record the  $t$ -statistics on the meta-regressions testing each hypothesis in each dataset, which also maps to the cell colors, which range from purple (most positive values), to white (zero), to orange (most negative values).

## B Appendix: Non-preregistered analyses

### B.1 Metaregression tables

**Table OA1:** Metaregressions table “Time to election”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Days until election (log scale)	<b>1.8 (0.6)</b>	<b>2.0 (0.5)</b>	0.2 (0.2)	<b>0.4 (0.1)</b>	0.2 (0.8)	<b>-1.5 (0.6)</b>	<b>-1.8 (0.5)</b>
Intercept	<b>3.0 (0.4)</b>	<b>1.7 (0.2)</b>	<b>0.9 (0.1)</b>				
Race: Other		<b>-2.4 (0.6)</b>					
Race: Gov	<b>1.7 (0.7)</b>						
Race: StateLeg	0.0 (1.0)	<b>-1.0 (0.4)</b>					
$\hat{R}^2$ (all vs. control)	0.04	0.13	0.02				$p = 0.000$
$\hat{R}^2$ (all predictors)	0.30	0.16	0.02				
$\hat{\sigma}$	1.40	0.78	0.44				
$N_{treatments}$	131	131	170				
Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Days until election (log scale)	-0.2 (0.6)	0.1 (0.5)	0.1 (0.1)	0.1 (0.1)	0.3 (0.8)	0.3 (0.7)	0.0 (0.5)
Intercept	<b>2.2 (0.4)</b>	<b>1.7 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		-0.5 (0.6)					
Race: Gov	-0.4 (1.2)						
Race: GA Runoff		-0.7 (0.4)					
Race: StateLeg	-0.1 (2.2)	<b>-1.7 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	< 0	< 0	< 0				$p = 0.914$
$\hat{R}^2$ (all predictors)	< 0	0.18	< 0				
$\hat{\sigma}$	1.44	0.43	0.35				
$N_{treatments}$	101	181	292				

### B.2 Robustness: dichotomized votechoice

**Table OA2:** Estimated mean and variability in ATEs when using dichotomized vote choice.

Election	No moderators			Race fixed effects		Study fixed effects	
	$\mu$	$\tau$	pval	$\tau$	pval	$\tau$	pval
2018	2.64 [1.83, 3.45]	1.67 [1.06, 2.36]	< .001	1.69 [1.07, 2.39]	< .001	1.50 [0.90, 2.17]	< .001
2020 Downballot	1.51 [0.98, 2.03]	0.66 [0.00, 1.29]	0.069	0.62 [0.00, 1.26]	0.136	0.68 [0.00, 1.33]	0.074
2020 Presidential	1.07 [0.81, 1.32]	0.50 [0.03, 0.77]	0.007	0.50 [0.03, 0.77]	0.007	0.48 [0.00, 0.75]	0.028

### B.3 Differential attrition analysis

In this subsection we discuss and present robustness checks regarding differential attrition. To summarize what follows:

- There are two sources of attrition in the data, and the sources are different by year. In the 2018 data, questions were optional, and so respondents could attrit by leaving questions blank *or* leaving the survey. In the 2020 data, questions were mandatory, so respondents could only attrit by leaving the survey.
- In the 2018 data, we are able to measure whether individuals left a question blank, but not whether they left the survey. We see evidence that participants in the control group were more likely to leave the questions blank. However, our analyses which use study fixed effects only examine variation between treatment arms (not the control), and we see limited differential attrition of this form between treatment arms (see second row of Figure [OA13](#)).
- In the 2020 data, the questions were mandatory but Swayable originally collected no data on whether the survey was completed. In response to our inquiries they were able to reconstruct data on survey completion for a subset of studies from their raw logs, which began collecting data on incomplete surveys only towards the end of 2020. We see limited signs of differential attrition in this subset of the data in all but one study.

To provide further detail, in addition to overall balance checks presented in Appendix [A.3](#), we test separately for two sources of attrition in our data. First, in the 2018 dataset only, respondents were able to opt out of answering outcome questions. We observe whether this occurred in the 2018 data. Second, in both years, some respondents exit the entire survey experiment post-treatment. For this second kind of attrition, we are only able to analyse a subset of the affected studies (those conducted towards the end of 2020) because, in earlier data, respondents who exited the survey mid-way were not recorded.

In the top row of Figure [OA11](#), we test for attrition-induced covariate imbalance by either mechanism, by regressing *missing\*covariate* on treatment condition (where *missing* is a dummy variable indicating when a respondent did not provide outcome data, and *covariate* is a demeaned demographic variable). This regression estimates the extent to which attrition produces imbalance on each covariate between treatment arms, similar to the preregistered balance checks presented in Appendix [A.3](#).

These tests reveal that differential non-response in the 2018 dataset produced statistically detectable covariate imbalance between treatment and control groups, but not between different treatments. This is primarily driven by a difference in the overall attrition *rate*, which was typically 5-10% larger in the control group than the treatment group (Figure [OA13](#) top). We hypothesize

that this is due to unfamiliarity with the candidates (races in the 2018 dataset were typically low-salience) causing some respondents to opt out when in the control-group. Critically, this means that our specifications with study fixed effects should not be affected by differential attrition.

In addition, while statistically significant, the scale of this covariate imbalance is substantively small and unlikely to materially affect the estimated ATEs in each individual survey, or the subsequent metaregressions in our main analyses without study fixed effects. In Figure OA11 (bottom), we estimate ATEs for each treatment using an IPW regression, in which respondents are inversely weighted by their propensity to provide a response<sup>11</sup>. These estimates differ only minimally from the unweighted estimates used for our preregistered analysis.

Furthermore, in Figure OA12 we present robustness checks in which all metaregressions are re-calculated using these IPW-estimated ATEs, as well as two alternative specifications that include fixed- or random- effects for study id (Note: these latter two specifications are somewhat extreme adjustments, as much of the variability in ad features is itself explained by the study an ad was tested in). We find that all alternative metaregressions specifications preserve the same broad pattern of results as our preregistered specifications, with small deviations relative to the large differences found between datasets. This provides strong evidence that attrition between treatment and control groups in the 2018 data does not substantively alter our main results presented in Figure 3

Finally, in Figure OA13, we present several other common tests for differential attrition. The columns in this Figure are the year of the study (2018 on the left, where we can only measure missingness due to the questions being optional; and 2020 on the right, for the subset of studies where we have access to missingness due to leaving the survey) and the rows are the following statistical tests:

1. Top row: **Difference in attrition rates between treatment and control groups.** As discussed above, this is substantial in the 2018 data due to opt-out outcomes. However, any attrition in the control group does not affect our analyses with study fixed effects, which examine variation among treatment arms only.
2. Middle row: **F-test on treatment differences.** Restricted to treatment videos only, we test whether the rate of attrition varies by the specific treatment. The p values of these tests (one per study) appear fairly uniform, suggesting that the attrition rate is the same across treatment groups.
3. Bottom row: **F-test on interaction with covariates.** We test for an interaction term between treatment condition and covariates, on the rate of attrition. These tests include the control

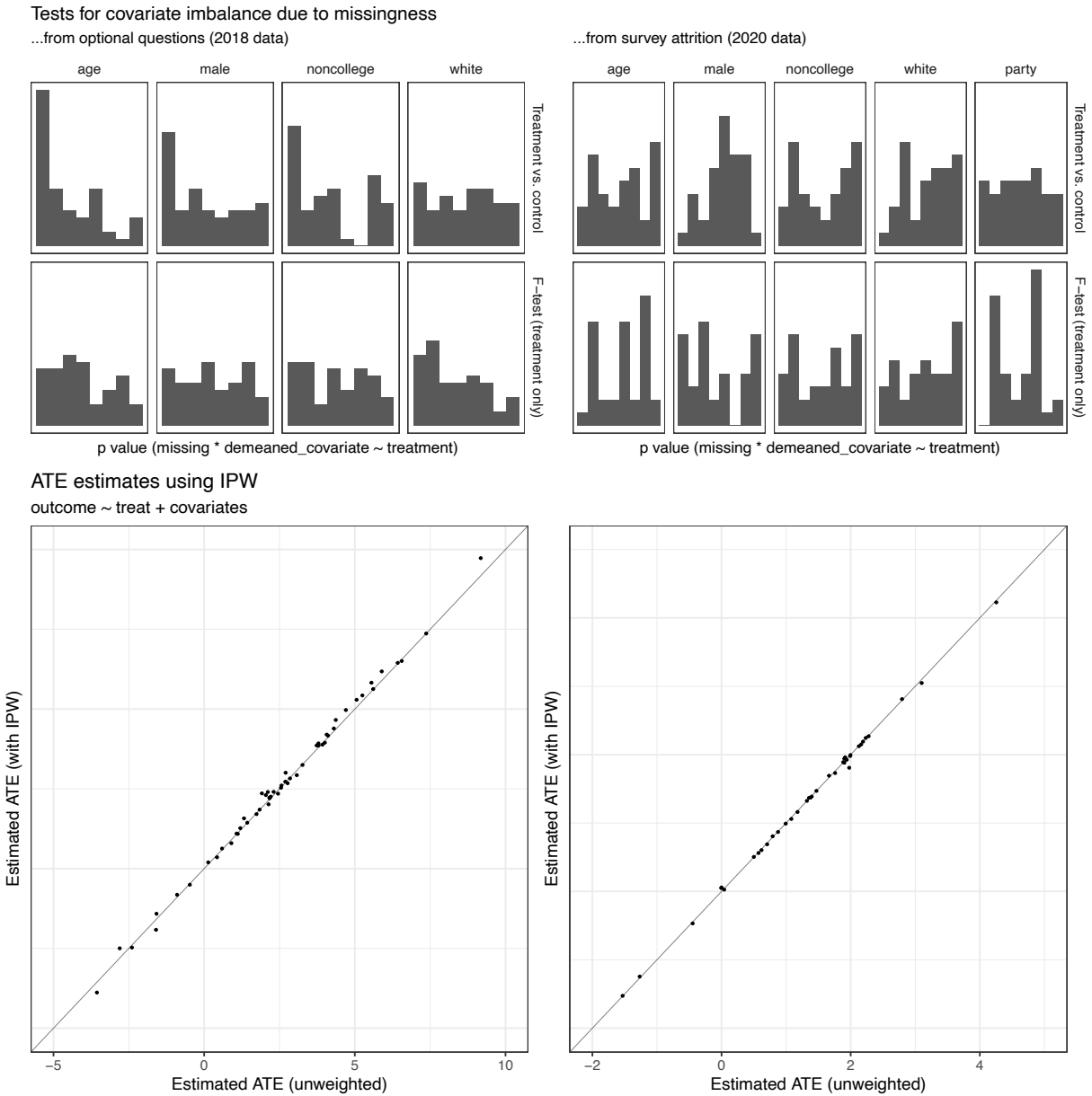
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<sup>11</sup>This propensity itself is estimated using a logistic regression,  $attrit \sim treat * (age + gender + ethnicity + education)$

group. The top row in this row are tests comparing the treatment and placebo groups; the bottom row is among treatment groups only. In the 2018 data, the p values of these tests (one per study) show a moderate-sized peak at  $p = 0$ , reflecting our finding of covariate imbalance discussed above. Note that the covariates in 2018 were measured post-treatment.



**Figure OA11: Robustness to attrition.**



*Notes: Top: Tests of covariate imbalance due to missingness. Top row shows p values by study for a regression  $missing * covariate \sim treat$ . Second row shows p values by study for a regression  $missing * covariate \sim content\_id$ , excluding respondents in the placebo group. Bottom: comparison of ATE estimates for each study based on OLS, vs. those inverse-probability-weighted estimates based on a logistic regression model  $missing \sim treat * covariates$ .*

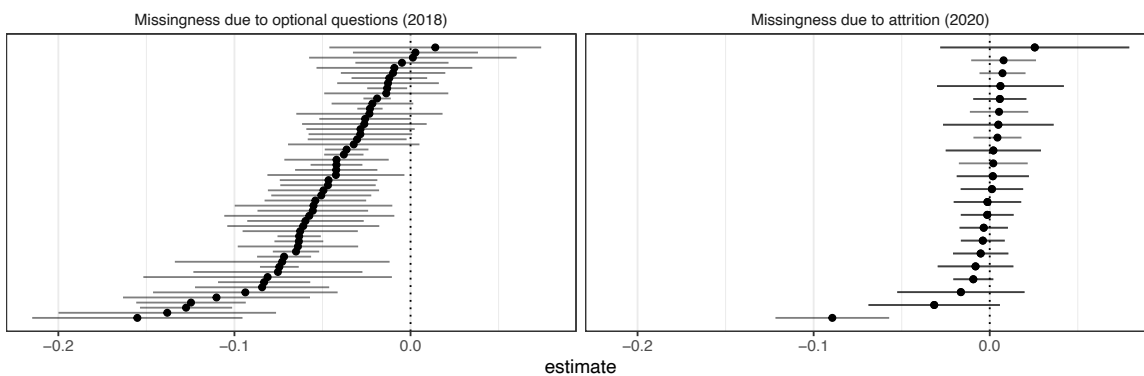
**Figure OA12:** Comparison of 2018 metaregression results when fit using alternative specifications (compare with Figure 3).

	Favorability				Vote choice				
	Standard	IPW	Study random effects	Study fixed effects	Standard	IPW	Study random effects	Study fixed effects	
2018 Primary hypotheses	Candidate facts	2.61*	2.49*	2.00*	1.28	1.54	1.38	1.21	0.79
	New fact (where fact present)	-1.88	-1.82	-2.48*	-2.48*	-1.29	-1.45	-2.04*	-2.28*
	Policy facts	-0.49	-0.45	-1.09	-1.12	0.20	0.21	-0.18	-0.51
	Primary focus: Candidate	2.63**	2.49*	1.81	0.67	0.48	0.36	1.19	1.59
	Primary focus: Issues	3.46**	3.33**	2.81**	1.72	2.57*	2.42*	2.80**	2.87**
	Technique: Negative name-calling	0.84	0.81	0.38	0.31	0.81	0.73	1.09	1.38
	Technique: Negative testimonial	1.57	1.57	1.65	1.54	1.24	1.30	0.66	0.26
	Technique: Negative transfer of association	0.13	0.19	0.88	1.26	-0.20	-0.20	0.61	1.29
	Technique: Plain folks	-0.26	-0.12	0.42	0.60	1.42	1.45	1.54	1.64
	Technique: Positive name-calling	0.30	0.30	-0.05	-0.59	-0.73	-0.63	-0.72	-0.95
	Technique: Positive testimonial	0.75	0.83	0.31	-0.13	-1.34	-1.22	-1.09	-0.62
	Technique: Positive transfer of association	-0.31	-0.34	0.25	0.40	0.83	0.80	1.37	1.83
2018 Secondary hypotheses	Cited fact (where fact present)	-2.07*	-1.99*	-1.69	-1.15	-0.82	-0.94	-1.01	-1.51
	Emotion: Anger	0.96	0.89	-0.16	-0.33	3.02**	2.89**	2.32*	1.50
	Emotion: Enthusiasm	1.21	1.12	0.75	0.28	-0.27	-0.24	0.03	0.42
	Explicit vote for	2.01*	1.91	1.85	1.72	2.83**	2.91**	2.75**	2.99**
	Messenger: Female	0.30	0.30	0.70	0.87	1.79	1.76	1.63	1.38
	Messenger: Politician	2.58*	2.49*	0.80	-0.54	-0.18	-0.14	-0.25	-0.72
	Primary tone: Contrast	0.52	0.42	-0.14	-0.52	0.58	0.54	0.50	0.24
	Primary tone: Positive	0.14	0.11	-0.69	-1.52	-1.47	-1.40	-1.15	-1.03
	Production value: High	1.03	1.11	0.68	0.53	0.50	0.33	0.45	0.44
	Specificity: Candidate facts	-0.12	-0.21	-0.48	-0.79	1.32	1.24	0.26	-0.54
	Specificity: Policy facts	-0.33	-0.29	-0.07	-0.16	-0.20	-0.30	0.24	0.29

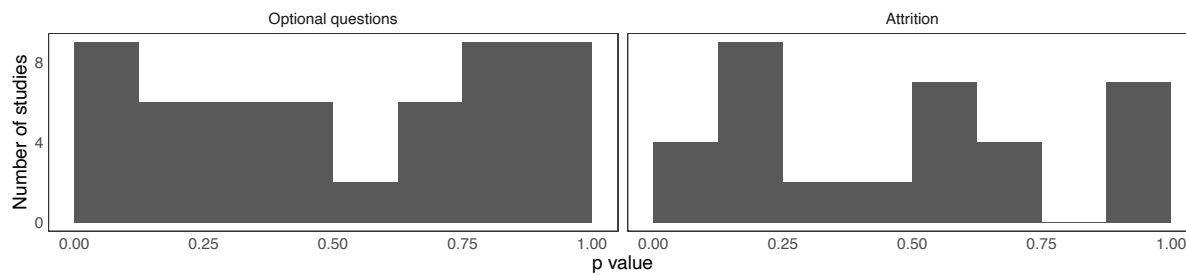
Notes: Each row corresponds with one hypothesis and each column corresponds with one dataset. The cells record the *t*-statistics on the meta-regressions testing each hypothesis in each dataset, which also maps to the cell colors, which range from purple (most positive values), to white (zero), to orange (most negative values).

**Figure OA13:** Tests for differential attrition in 2018 (left) and 2020 (right).

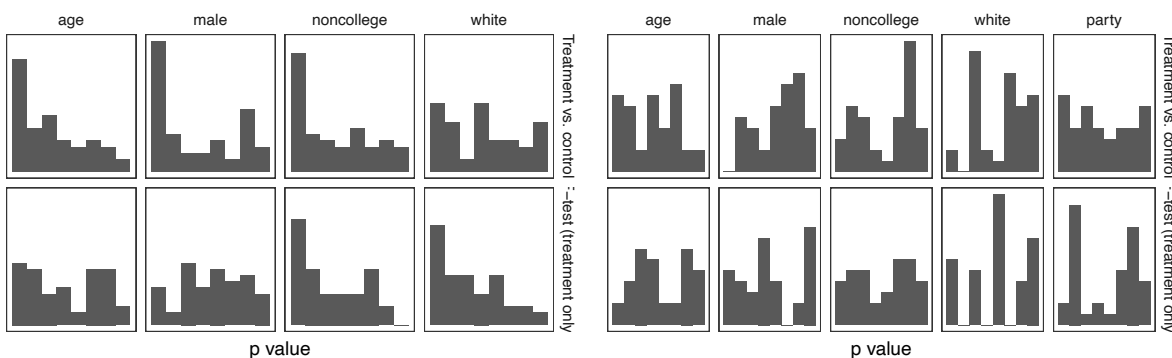
Attrition rate, treatment vs. control  
 missing ~ treat



F-test on treatment differences  
 missing ~ content\_id (excluding control)



Tests on interaction with covariates  
 missing ~ {treat or content\_id} \* covariate



## C Appendix: Returns to experimentation simulation studies

### C.1 Mapping survey-based to field estimates

As noted in the main text, immediately measured survey outcomes are likely to overstate the effects of television ads in the field. Our simulations therefore need to scale down in-survey point estimates to likely in-field effects in order to ascertain the likely implications of survey-based results for real-world elections. In particular, for the purposes of our simulations, in order to translate between the survey treatment effects estimated in this study and the real-world impacts of advertising on vote-share, we begin by looking to existing estimates for the cost-effectiveness of campaign TV advertising. For a typical U.S. Senate election, [Sides, Vavreck, and Warshaw \(2022\)](#) estimate that a campaign earns approximately 5 votes per \$1000 spent on TV advertising (“5 VPK”, or \$200 per vote). In our simulations, we then scale this return-on-advertising to vary between ads in direct proportion to their survey-estimated treatments effects – for example, an ad with twice the typical ATE is assumed to yield returns to a campaign of 10 VPK. To simulate the distribution of effects that a campaign produces, we use the  $\mu$  and  $\tau$  parameters estimated from Swayable data on vote-choice outcome, averaged over all three datasets ([Table 2](#)). We first sample *true* treatment effects from a Normal distribution  $N(\mu, \tau)$ , and then simulate an experiment by sampling *estimated* treatment effects centered on these true values (with empirical sampling variability). Campaigns are assumed to choose to air the single ad with the largest ATE estimate, and then based on the sampled *true* ATE of this ad we derive quantities such as vote gain. The full set of parameters used in this simulation model is provided in [Table 3](#).

The results from [Sides, Vavreck, and Warshaw \(2022\)](#) are similar to results from [Spenkuch and Toniatti \(2018\)](#). In particular, both studies suggest a ratio between in-field and in-survey effects of very roughly 100, meaning that when an experimental participant watches a persuasive advertisement in a survey experiment, its impact on self-reported vote intention is approximately 100 times larger than the real-world impact that a single exposure to a television advertisement typically has on vote behavior.

Starting with [Sides, Vavreck, and Warshaw \(2022\)](#), the authors estimate ads produce votes at approximately \$200 per net vote. To ‘work backwards’ from this point, we assume that television advertising costs 6c per voter impression (very roughly, 3c per impression in a population for which half of viewers vote). At this rate, the implied treatment effect of television ad exposure on vote share would be approximately 0.015pp for Senate races, and 0.008pp for Presidential races. Compared these values with the average survey treatment effects  $\mu$  from [Table OA2](#), we calculate the survey-to-field conversion factor to be approximately 100 ( $= \frac{1.53}{0.015}$ ) based on the 2020 Downballot dataset. [Spenkuch and Toniatti \(2018\)](#) provide no estimates for Senate races.

To produce a ‘survey-to-field deflation’ estimate based instead on the 2020 Presidential dataset,

Sides, Vavreck, and Warshaw (2022) estimate the return on Presidential TV advertising to be \$365 per vote; in Spenkuch and Toniatti (2018), the same quantity is estimated as \$170 per vote. When applying the same method as above relate these estimated returns with Swayable’s 2020 Presidential data ( $\mu = 1.07$ , Table OA2), we estimate the survey-to-field conversion factor to be estimated to be approximately 130 based on Sides, Vavreck, and Warshaw (2022), or to be approximately 60 based on Spenkuch and Toniatti (2018). As an alternative, the latter work provides also its own estimate for the “per-impression” effect of Presidential TV advertising, found to be 0.017pp on vote share per impression per capita<sup>12</sup>. This may be therefore compared directly to the survey ATEs without requiring any further assumptions about the cost of advertising. In this case, the survey-to-field deflation factor is estimated again to be 60 ( $= \frac{1.07}{0.017}$ ).

## C.2 Simulating returns to experimentation choices

Campaigns have to choose how much of their advertising budget to invest in experimentation and how to allocate those funds to alternative experimental designs. Here we consider only two design parameters which are the principal decisions campaigns face when determining how much money to invest in ad testing: the number of ads to develop for experimental testing purposes and the total number of subjects to enroll in the experiment.

In Figure OA14 we report the results of simulations that illustrate the impacts of these choices on costs and votes gained. Our simulations consider the expected costs and subsequent vote gains from a campaign running experiments on its advertising and then running those advertisements. Using the results of our meta-analysis, we estimated that the treatment effects standard deviation is 0.51 times the average effect (what we referred to as ad variability, or  $\frac{\tau}{\mu}$ ). For the following analysis, we assume a medium sized U.S. Senate campaign, considering \$1,000,000 in ad spend for an election where 5,000,000 people vote.

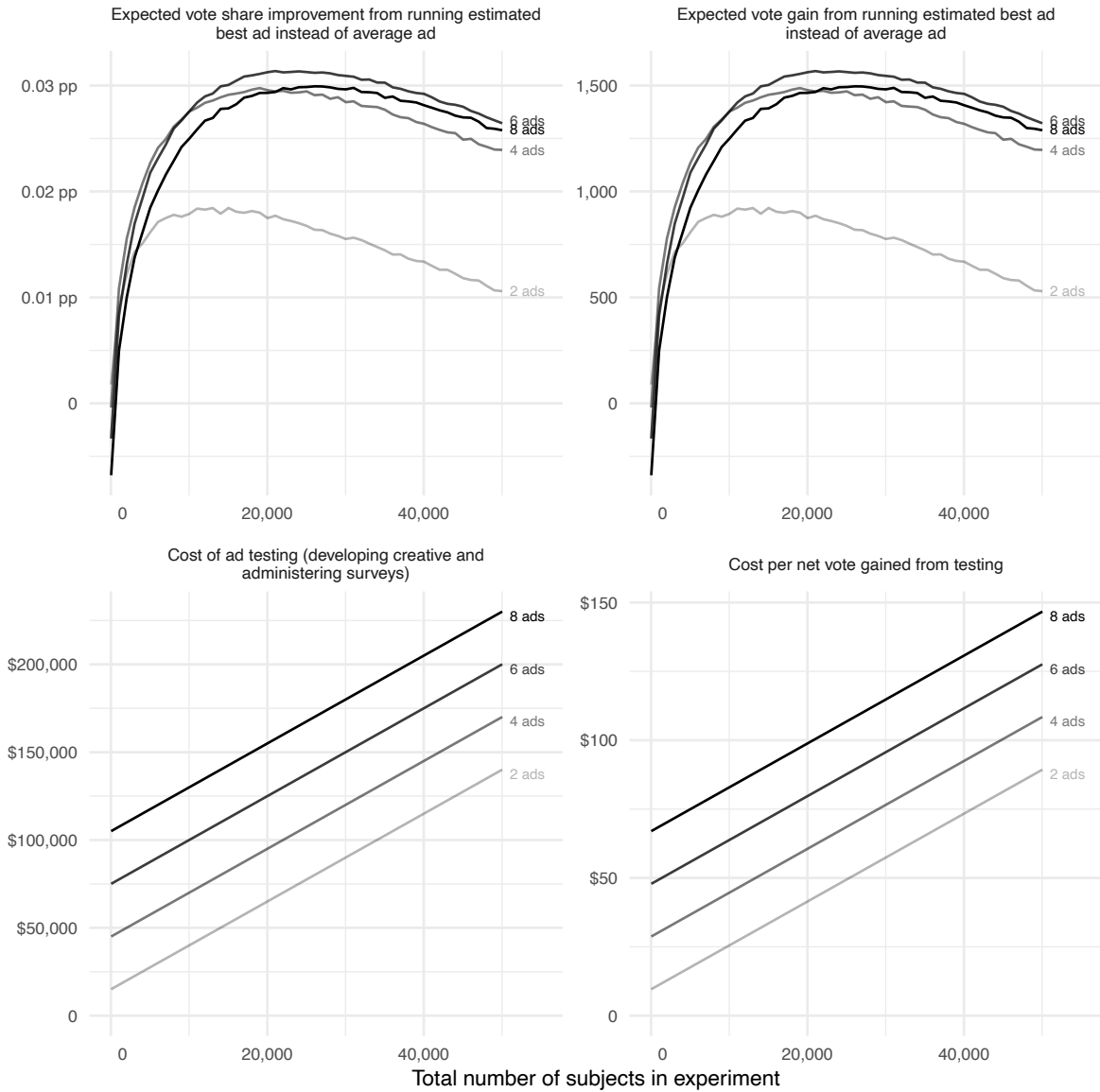
Based on these assumptions, the top left panel of Figure OA14 shows the expected vote share gain a campaign would enjoy by running their best ad instead of an average ad. In these simulations, we simulate a distribution of true treatment effects and the distribution of estimates a campaign would reach, which is a function of both the true treatment effects and sampling variability. The campaign then selects the ad with the highest estimate and exposes voters to it, resulting in a vote share gain equal to the discounted size of the selected ad. As can be seen in the top left panel,

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<sup>12</sup>For Presidential election advertising, they estimate that 10 impressions per capita produces a partisan difference in vote shares of 0.304 percentage points. This would translate to a per-impression effect on vote share for a single candidate of 0.017 percentage points (dividing by 10 to translate to impression per capita, by 2 to translate from differences in vote shares between candidates to a single candidate’s percentage of the vote). Note that the Spenkuch and Toniatti (2018) estimate already implicitly reflects the fact that not every person who is shown ads votes, and so no further adjustments for voter turnout rates are necessary: “We measure advertising intensity in impressions per capita among voting-aged adults. An impression is defined as one viewer being exposed to one commercial. Our metric of advertising intensity thus corresponds to the number of ads seen by the average adult in a particular DMA” (p. 1993).

our results imply that campaigns can gain an additional 0.03 percentage points in final vote share by testing six ads among 20,000 subjects and running the ad with the highest point estimates.

**Figure OA14:** Costs and returns to ad experimentation for a typical Senate campaign, assuming ads cost \$15,000 to develop and \$2.50 per subject to test.



*Notes: Lines show simulations where 2, 4, 6, and 8 ads are tested.*

Such a gain is politically meaningful. The top right panel of Figure OA14 shows the impact on a candidate's total vote margin such an effect would have in an election where 5,000,000 people vote, such as a typical US Senate race. The expected impact of making six ads, running an experiment with 10,000 subjects, and running the best ad instead of an average ad is an increase of

approximately 1,500 net votes.

The bottom left panel shows that this gain comes at a surprisingly small cost. For the sake of our simulations we assume making an additional ad costs \$15,000 and that survey experiments on ads' effectiveness cost approximately \$2.50 per subject included in the experiment (these rough figures are derived from conversations with political practitioners). Under these assumptions, creating six ads and testing them in an experimental sample of 20,000 subjects would cost \$125,000 (above creating just a single ad).

These numbers imply that ad experimentation is an astoundingly compelling investment for campaigns, with a cost per net vote of only \$83 in this example. This “cost per vote” is about half the estimated cost per net vote of ad spending itself, and on par with the most cost-effective get out the vote interventions (see [Green and Gerber 2019](#); [Spenkuch and Toniatti 2018](#); [Sides, Vavreck, and Warshaw 2022](#)).

### C.3 The costs of incorrect beliefs about ad variability

One implication of our simulations is that campaigns can earn more votes to the extent they have accurate beliefs about the extent of ad variability. As shown in Appendix [D](#) this is a very real possibility: without access to the archive we analyze here and only having seen a smaller number of ad experiments, practitioners should have much noisier and, on average, less accurate beliefs about ad variability.

This setting is likely to lead campaigns to make suboptimal resource allocation decisions. Intuitively, if campaigns underestimate ad variability, they will underestimate the returns to experimentation and then underinvest in experimentation. Conversely, if campaigns overestimate the extent of ad variability, they will invest more in experimentation than they should—on average ‘wasting’ money that should be spent running ads.

In this subsection we illustrate the benefits to campaigns of having correct beliefs about ad variability. In particular, we use the simulations described in the main text to determine how campaigns would optimally allocate resources between ad experimentation and running ads at three budget levels—\$500,000, \$1,000,000, and \$5,000,000—and if they maintained various *subjective beliefs* about ad variability ( $\frac{\tau}{\mu}$ ). For example, in these simulations, campaigns with subjective beliefs that ad variability is tiny would invest nothing in experimentation (as determined by the simulations shown in the main text). However, in the set of simulations in this subsection, we allow campaigns' beliefs to be incorrect. Therefore, although campaigns behave optimally under their beliefs about ad variability, the number of votes their ads actually produce is simulated under the assumption that true  $\frac{\tau}{\mu} = 0.51$ . For example, a campaign that underestimates the extent of ad variability would not conduct experiments at all, but the true treatment effect of a single ad they

make and run would still be drawn from a distribution with the standard deviation  $\frac{\tau}{\mu} = 0.51$ .

**Figure OA15:** Votes gained from experimentation if campaigns act optimally under various beliefs about ad variability, if true  $\frac{\tau}{\mu} = 0.51$ .

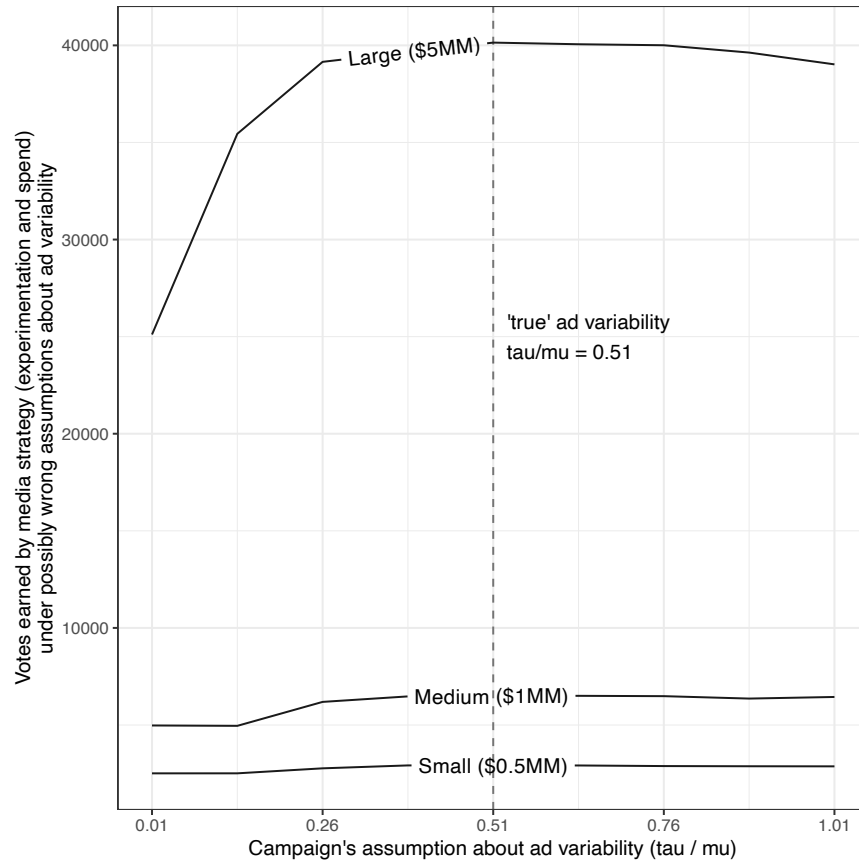


Figure OA15 shows the results. The simulation always assumes that true  $\frac{\tau}{\mu} = 0.51$ . The horizontal axis shows campaigns' subjective beliefs about  $\frac{\tau}{\mu}$ . At the ad variability value of 0.51, campaigns therefore have correct beliefs under the simulation. The vertical axis shows the number of votes that the campaign's ads would produce.

The plot illustrates three key points. First, as can be seen, for all three campaign budget scenarios, the number of votes the campaign gains is maximized when the campaigns have correct beliefs (when campaigns – in the simulation, correctly – believe  $\frac{\tau}{\mu} = 0.51$ ). Campaigns perform less well when their beliefs are incorrect.

Second (and more interesting) is the asymmetric nature of these costs over the distribution of inaccurate beliefs. Campaigns who overestimate  $\frac{\tau}{\mu}$  perform slightly less well, but the costs to overestimating  $\frac{\tau}{\mu}$  are minimal. This pattern occurs both because the additional funds that campaigns invest in experiments if they believe  $\frac{\tau}{\mu}$  is larger are relatively minimal (per Figure 4a, the difference determines how around 3% of the media budget is allocated) and because this funding still



does, on average, increase the treatment effects of the selected ad, partially offsetting the decline in left-over funds for media spending. By contrast, the costs of underestimating  $\frac{\tau}{\mu}$  are significantly larger. For instance, if campaigns make an error of the same magnitude (0.50) in the negative instead of positive direction, and so believe  $\frac{\tau}{\mu} = 0.01$ , they do not invest in experimentation at all and perform significantly less well. At values between 0.01 and 0.51, the costs are smaller but remain substantial, and are far greater than the costs of overestimating  $\frac{\tau}{\mu}$ .

Third and finally, the results show that the above two dynamics are especially acute for larger campaigns. This conclusion follows from the results we showed in the main text that the returns to experimentation are largest for the most well-financed campaigns. Because experiments increase the cost-efficiency of ad spending, they disproportionately benefit well-resourced campaigns. However, as a consequence, the converse is also true: well-resourced campaigns face the largest costs if they underestimate ad variability and therefore fail to experiment.

## D Appendix: Contribution of our meta-study

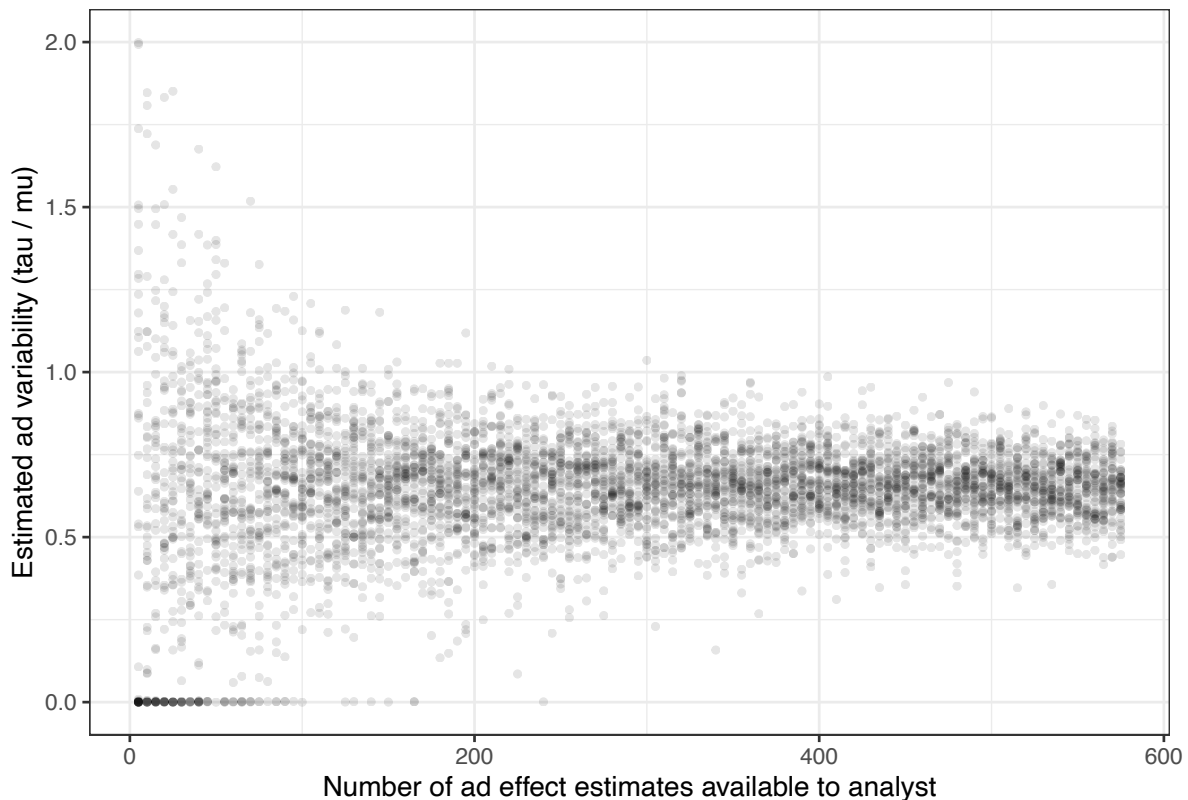
As described above, the returns to experimentation depend crucially on the variability in the effectiveness of ads, as captured by the ratio of the standard deviation of effects to the average effect ( $\frac{\tau}{\mu}$ ). When the variability is low, experimentation is relatively less attractive because all ads perform similarly. When variability is high, experimentation is relatively more attractive. This makes ad variability the key parameter practitioners and scholars must form beliefs about when assessing the value of ad experimentation.

In this appendix, we explore how beliefs about the variability of ad effects might vary depending on how many ad effects are available to the analyst. This speaks to the contribution of our study because it shows that individuals (e.g., individual scholars, campaigns, or campaign consultants) who have seen a smaller number of experimental results than we have in our dataset would have much less accurate beliefs about the extent to which advertising effects vary than we offer. In other words, we show that access to the conclusions from our dataset will allow many scholars and practitioners to form much more precise beliefs about ad variability than they would have been able to otherwise.

In particular, Figure [OA16](#) shows the results of a simulation study in which we estimate the variability of advertisement effects ( $\frac{\tau}{\mu}$ ) from differently-sized subsets of the effects of our ads on vote choice. The horizontal axis describes the number of advertisements available to the analyst, from a low of five ads to a high of 575 ads, the total number of average effects on vote choice in our meta-study. The vertical axis displays the estimate of the standard deviation of effects from the corresponding meta regression. For each number of ads, we simulate the resulting estimate of  $\frac{\tau}{\mu}$  50 times, sampling the appropriate number of ads effects from our dataset with replacement.

The figure shows that when analysts have seen the effects of only few ads, they might have very heterogeneous beliefs about the extent to which ad effects vary, but as the number of ads studies increases, beliefs about variability sharpen up quite a bit.

**Figure OA16:** Distribution of tau estimates, depending on number ad effect estimates available to analysts



This simulation underlines the contribution of our meta-study. Understanding the distribution of ad effects is difficult, even when an analyst has access to dozens of estimates.

## References for Appendices

- Green, Donald P., and Alan S. Gerber. 2019. *Get Out The Vote: How to Increase Voter Turnout*. 3rd ed. Washington, DC: Brookings Institution Press.
- Sides, John, Lynn Vavreck, and Christopher Warshaw. 2022. “The Effect of Television Advertising in United States Elections.” *American Political Science Review* 116 (2): 702–718.
- Spenkuch, Jörg L, and David Toniatti. 2018. “Political Advertising and Election Results.” *The Quarterly Journal of Economics* 133 (4): 1981–2036.

# Dataverse Appendix

## DA 1 Summary of all studies

Table DA1: All 2018 studies

Date	N	N treatments	N per treatment	States targeted	Vote choice	Favorability	Age	Gender	Education	Ethnicity	Ideology	Partisanship	Trump approval	Excluding respondents	
2018-04-09	176	4	34	1		•									after added/removed
2018-04-21	4557	5	723	50	•										
2018-06-30	801	1	400	1		•									
2018-07-24	1816	2	544	1		•									
2018-09-02	1306	3	274	1	•	•									
2018-09-20	419	3	87	1		•									
2018-09-23	1155	3	245	1	•	•									
2018-09-25	8854	6	938	50	•	•									
2018-09-30	462	3	99	1		•									
2018-10-06	433	3	92	1		•									
2018-10-06	530	3	112	1	•	•									
2018-10-06	12732	8	1113	50	•	•									
2018-10-10	2292	5	315	1	•	•									
2018-10-17	11773	10	871	50	•	•									
2018-10-20	11094	9	914	50	•	•									
2018-10-21	2571	3	547	1	•	•									
2018-10-22	712	2	206	1	•	•									
2018-10-22	4610	9	383	1		•									
2018-10-21	722	2	216	1		•									
2018-10-24	12031	11	832	50	•	•									after treatment added
2018-10-24	472	2	139	1		•									
2018-10-25	370	2	108	1		•									
2018-10-24	749	2	223	1	•	•									after treatment added
2018-10-30	1631	3	344	1	•	•									
2018-11-02	540	2	158	1	•	•									
2018-11-01	761	2	225	1	•	•									
2018-11-01	528	1	226	1	•	•									
2018-11-01	537	2	155	1	•	•									
2018-11-01	1585	3	315	4	•	•									after added/removed
2018-11-02	2603	12	169	1	•	•									
2018-11-01	2060	3	439	50	•	•									
2018-11-03	1598	4	263	1	•	•									
2019-03-15	1489	4	247	1		•									

**Table DA2:** All 2020 Presidential studies

Date	N	N treatments	N per treatment	States targeted	Vote choice	Favorability	Age	Gender	Education	Ethnicity	Ideology	Partisanship	Trump approval	Excluding respondents
2020-02-13	8086	8	745	9	.	.	.	.	.	.	.	.	.	
2020-02-27	6774	7	692	11	.	.	.	.	.	.	.	.	.	
2020-03-19	3846	4	640	1	.	.	.	.	.	.	.	.	.	
2020-04-11	3911	4	653	1	.	.	.	.	.	.	.	.	.	
2020-05-03	15008	2	3557	8	.	.	.	.	.	.	.	.	.	
2020-05-20	4436	6	513	5	.	.	.	.	.	.	.	.	.	
2020-05-27	11401	7	1182	50	.	.	.	.	.	.	.	.	.	
2020-05-28	3952	3	835	3	.	.	.	.	.	.	.	.	.	
2020-06-24	4067	2	881	50	.	.	.	.	.	.	.	.	.	
2020-07-01	4735	8	435	6	.	.	.	.	.	.	.	.	.	
2020-07-01	6981	6	791	50	.	.	.	.	.	.	.	.	.	
2020-07-03	3115	3	656	1	.	.	.	.	.	.	.	.	.	
2020-07-10	12846	11	899	50	.	.	.	.	.	.	.	.	.	
2020-07-15	4324	8	402	6	.	.	.	.	.	.	.	.	.	
2020-07-22	6393	4	938	50	.	.	.	.	.	.	.	.	.	
2020-07-28	4579	5	635	3	.	.	.	.	.	.	.	.	.	
2020-07-29	3795	5	528	8	.	.	.	.	.	.	.	.	.	
2020-07-28	6850	5	942	50	.	.	.	.	.	.	.	.	.	
2020-08-01	4992	5	687	3	.	.	.	.	.	.	.	.	.	
2020-08-04	6757	4	1014	50	.	.	.	.	.	.	.	.	.	
2020-08-08	4826	8	481	6	.	.	.	.	.	.	.	.	.	
2020-08-11	4432	3	885	50	.	.	.	.	.	.	.	.	.	
2020-08-13	2675	3	568	3	.	.	.	.	.	.	.	.	.	
2020-08-16	3144	3	626	2	.	.	.	.	.	.	.	.	.	
2020-08-19	5391	6	672	50	.	.	.	.	.	.	.	.	.	
2020-08-28	4776	8	476	6	.	.	.	.	.	.	.	.	.	
2020-09-13	3712	3	745	50	.	.	.	.	.	.	.	.	.	
2020-09-16	5471	8	545	6	.	.	.	.	.	.	.	.	.	
2020-09-24	1776	1	592	2	.	.	.	.	.	.	.	.	.	
2020-09-19	1838	3	368	50	.	.	.	.	.	.	.	.	.	after treatment added
2020-09-18	636	1	263	50	.	.	.	.	.	.	.	.	.	
2020-09-20	5393	8	539	6	.	.	.	.	.	.	.	.	.	
2020-09-20	2466	4	410	6	.	.	.	.	.	.	.	.	.	
2020-09-23	6692	5	953	50	.	.	.	.	.	.	.	.	.	
2020-09-24	4876	5	699	50	.	.	.	.	.	.	.	.	.	
2020-09-25	1201	1	600	6	.	.	.	.	.	.	.	.	.	
2020-09-29	5059	4	842	50	.	.	.	.	.	.	.	.	.	
2020-10-07	2301	3	484	50	.	.	.	.	.	.	.	.	.	
2020-10-06	2662	3	563	50	.	.	.	.	.	.	.	.	.	
2020-10-02	5835	3	1233	50	.	.	.	.	.	.	.	.	.	
2020-10-08	3040	5	431	4	.	.	.	.	.	.	.	.	.	
2020-10-08	7808	6	972	50	.	.	.	.	.	.	.	.	.	
2020-10-14	5059	3	1070	50	.	.	.	.	.	.	.	.	.	
2020-10-10	6789	10	566	6	.	.	.	.	.	.	.	.	.	
2020-10-15	4860	4	804	50	.	.	.	.	.	.	.	.	.	
2020-10-14	7385	6	922	50	.	.	.	.	.	.	.	.	.	
2020-10-15	3061	4	505	10	.	.	.	.	.	.	.	.	.	
2020-10-16	4908	5	703	3	.	.	.	.	.	.	.	.	.	
2020-10-16	2903	2	773	50	.	.	.	.	.	.	.	.	.	
2020-10-16	6699	7	747	8	.	.	.	.	.	.	.	.	.	
2020-10-18	8307	9	752	50	.	.	.	.	.	.	.	.	.	
2020-10-21	3961	6	494	10	.	.	.	.	.	.	.	.	.	
2020-10-20	6378	7	707	50	.	.	.	.	.	.	.	.	.	
2020-10-20	5631	6	701	50	.	.	.	.	.	.	.	.	.	
2020-10-21	5982	6	748	50	.	.	.	.	.	.	.	.	.	
2020-10-22	7060	6	879	50	.	.	.	.	.	.	.	.	.	
2020-10-22	5445	5	775	50	.	.	.	.	.	.	.	.	.	
2020-10-24	5303	5	759	50	.	.	.	.	.	.	.	.	.	

**Table DA3:** All 2020 downballot studies

Date	N	N treatments	N per treatment	States targeted	Vote choice	Favorability	Age	Gender	Education	Ethnicity	Ideology	Partisanship	Trump approval	Excluding respondents
2019-12-07	4654	3	970	14		•								
2020-01-16	4732	3	988	14		•								
2020-02-06	4371	3	675	50	•									
2020-02-14	1354	3	292	1	•	•								
2020-02-16	1196	3	252	1	•	•								
2020-03-05	5673	5	782	11	•									
2020-07-27	1344	4	226	1	•	•								after treatment removed
2020-08-02	698	2	209	1	•	•								
2020-08-26	1797	3	377	8	•	•								
2020-08-16	1686	4	280	1	•									
2020-08-17	775	3	159	50	•	•								
2020-08-20	754	3	161	1	•	•								
2020-08-25	742	3	158	50	•	•								
2020-08-29	1691	5	241	1	•	•								
2020-09-21	807	3	168	1	•	•								
2020-09-05	966	3	204	50	•	•								
2020-09-06	835	4	138	50	•	•								
2020-09-07	1988	3	419	1	•	•								
2020-09-10	811	2	237	50	•	•								
2020-09-25	675	3	142	50	•	•								
2020-09-18	820	4	137	1	•	•								
2020-09-12	1739	4	292	1	•	•								
2020-09-27	2204	3	465	1	•	•								
2020-09-12	3223	5	462	3	•	•								
2020-09-19	639	3	138	1	•	•								
2020-09-19	2068	3	438	1	•	•								
2020-09-20	1116	2	323	1	•	•								
2020-09-26	4949	4	827	1	•	•								
2020-09-26	2878	4	479	1	•	•								
2020-09-30	3913	8	391	10	•	•								after treatment added
2020-10-06	2355	4	391	1	•	•								
2020-10-03	564	3	118	1	•	•								
2020-10-05	614	5	87	1	•	•								after treatment added
2020-10-05	203	2	59	1	•	•								after treatment added
2020-10-04	1388	2	413	1	•	•								
2020-10-03	560	1	279	1	•	•								
2020-10-04	667	4	110	1	•	•								
2020-10-05	233	1	113	1	•	•								after treatment added
2020-10-08	523	2	147	1	•	•								
2020-10-14	1680	3	353	1	•	•								
2020-10-14	1674	3	357	1	•	•								
2020-10-18	1642	5	233	1	•	•								
2020-10-19	253	3	49	50	•	•								after treatment added
2020-10-24	1850	4	307	1	•	•								
2020-11-18	2876	4	481	1	•	•								
2020-11-27	2785	4	464	1	•	•								
2020-12-02	2440	8	241	1	•	•								
2020-12-03	2855	6	357	1	•	•								
2020-12-06	3338	4	561	1	•	•								
2020-12-08	1972	2	573	1	•	•								
2020-12-09	2027	4	332	1	•	•								
2020-12-10	2058	2	503	1	•	•								
2020-12-16	2785	4	467	1	•	•								
2020-12-25	1521	2	384	1	•	•								
2020-12-22	1821	2	460	1	•	•								

## DA 2 Metaregression tables

This section contains the full results of all (pre-registered) metaregressions. Independent variables of interest are above mid line, and control variables below the mid line.  $\hat{\sigma}$  is the estimated residual variance in effect sizes, after accounting for all regressors.  $\hat{R}^2$  (all vs. control) is the variance explained by variables of interest, after accounting for the control variables (estimated as the simple ratio between  $\hat{\sigma}$ s when all variables are included vs. when only control variables are included).  $\hat{R}^2$  (all predictors) is the variance explained by all variables, including control variables (ratio between  $\hat{\sigma}$  with all variables included vs. intercept-only). Finally, to substantiate the claim of variability between elections, each table contains the p value that coefficients of interest (those above the mid line) are equal across all three datasets (a second-order metaregression).

**Table DA4:** Metaregressions table “Overall, without race fixed-effects”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Intercept	<b>2.6 (0.3)</b>	<b>1.4 (0.2)</b>	<b>1.0 (0.1)</b>	<b>1.2 (0.1)</b>	<b>-1.2 (0.3)</b>	<b>-1.7 (0.3)</b>	<b>-0.5 (0.2)</b>
$\hat{\sigma}$	1.67	0.85	0.44				$p = 0.000$
$N_{treatments}$	131	131	170				
Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Intercept	<b>2.3 (0.3)</b>	<b>1.2 (0.2)</b>	<b>0.8 (0.1)</b>	<b>1.0 (0.1)</b>	<b>-1.1 (0.4)</b>	<b>-1.4 (0.3)</b>	-0.3 (0.2)
$\hat{\sigma}$	1.42	0.47	0.34				$p = 0.000$
$N_{treatments}$	101	181	292				

**Table DA5:** Metaregressions table “Overall”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Intercept	<b>2.2 (0.3)</b>	<b>1.8 (0.2)</b>	<b>1.0 (0.1)</b>	<b>1.1 (0.1)</b>	-0.4 (0.4)	<b>-1.3 (0.3)</b>	<b>-0.8 (0.2)</b>
Race: Other		<b>-1.2 (0.6)</b>					
Race: Gov	<b>2.3 (0.7)</b>						
Race: StateLeg	0.2 (1.0)	<b>-0.9 (0.4)</b>					
$\hat{R}^2$ (all predictors)	0.27	0.04	0.00				$p = 0.000$
$\hat{\sigma}$	1.42	0.83	0.44				
$N_{treatments}$	131	131	170				
Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Intercept	<b>2.3 (0.4)</b>	<b>1.7 (0.3)</b>	<b>0.8 (0.1)</b>	<b>1.0 (0.1)</b>	-0.6 (0.4)	<b>-1.5 (0.4)</b>	<b>-0.9 (0.3)</b>
Race: Other		-0.4 (0.5)					
Race: Gov	-0.3 (1.2)						
Race: GA Runoff		-0.7 (0.4)					
Race: StateLeg	-0.2 (2.2)	<b>-1.8 (0.5)</b>					
$\hat{R}^2$ (all predictors)	< 0	0.20	0.00				$p = 0.000$
$\hat{\sigma}$	1.43	0.42	0.34				
$N_{treatments}$	101	181	292				

**Table DA6:** Metaregressions table “Overall, with study fixed effects”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
(Studies)	...	...	...				
$\hat{R}^2$ (all predictors)	0.59	0.25	0.10				
$\hat{\sigma}$	1.07	0.74	0.42				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
(Studies)	...	...	...				
$\hat{R}^2$ (all predictors)	0.21	0.38	0.10				
$\hat{\sigma}$	1.26	0.37	0.33				
$N_{treatments}$	101	181	292				

**Table DA7:** Metaregressions table “Primary focus”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Primary focus: Candidate	<b>1.9 (0.7)</b>	0.4 (0.5)	-0.1 (0.2)	0.1 (0.2)	-1.5 (0.9)	<b>-2.0 (0.8)</b>	-0.5 (0.5)
Primary focus: Issues	<b>2.5 (0.7)</b>	-1.0 (0.6)	<b>0.5 (0.2)</b>	<b>0.5 (0.2)</b>	<b>-3.5 (0.9)</b>	<b>-2.0 (0.7)</b>	<b>1.4 (0.6)</b>
Intercept	-0.0 (0.7)	<b>2.4 (0.7)</b>	<b>0.8 (0.2)</b>				
Race: Other		<b>-1.2 (0.5)</b>					
Race: Gov	<b>1.6 (0.7)</b>						
Race: StateLeg	0.2 (1.0)	<b>-1.2 (0.4)</b>					
$\hat{R}^2$ (all vs. control)	0.13	0.08	0.22				$p = 0.000$
$\hat{R}^2$ (all predictors)	0.37	0.11	0.22				
$\hat{\sigma}$	1.33	0.80	0.39				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Primary focus: Candidate	0.5 (0.9)	0.0 (0.4)	-0.2 (0.2)	-0.1 (0.1)	-0.4 (1.0)	-0.6 (0.9)	-0.2 (0.4)
Primary focus: Issues	<b>2.2 (0.9)</b>	-0.5 (0.4)	-0.1 (0.2)	-0.1 (0.1)	<b>-2.7 (1.0)</b>	<b>-2.3 (0.9)</b>	0.4 (0.5)
Intercept	0.8 (0.9)	<b>2.1 (0.5)</b>	<b>1.0 (0.2)</b>				
Race: Other		-0.5 (0.5)					
Race: Gov	-0.7 (1.2)						
Race: GA Runoff		<b>-0.9 (0.4)</b>					
Race: StateLeg	-0.1 (2.2)	<b>-1.9 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.17	< 0	< 0				$p = 0.015$
$\hat{R}^2$ (all predictors)	0.15	0.12	< 0				
$\hat{\sigma}$	1.31	0.44	0.35				
$N_{treatments}$	101	181	292				

**Table DA8:** Metaregressions table “New fact (where fact present)”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
New fact (where fact present)	-1.2 (0.6)	<b>1.0 (0.4)</b>	0.1 (0.1)	0.1 (0.1)	<b>2.1 (0.8)</b>	1.2 (0.6)	<b>-0.9 (0.5)</b>
Intercept	0.7 (0.8)	<b>2.3 (0.7)</b>	<b>0.7 (0.2)</b>				
Race: Other		-0.7 (0.6)					
Race: Gov	1.4 (0.7)						
Race: StateLeg	-0.4 (1.0)	<b>-1.5 (0.5)</b>					
Primary focus: Candidate	<b>2.1 (0.8)</b>	0.3 (0.5)	-0.2 (0.2)				
Primary focus: Issues	<b>2.6 (0.8)</b>	<b>-1.5 (0.6)</b>	<b>0.5 (0.2)</b>				
$\hat{R}^2$ (all vs. control)	0.09	< 0	< 0				$p = 0.015$
$\hat{R}^2$ (all predictors)	0.38	0.10	0.50				
$\hat{\sigma}$	1.32	0.79	0.26				
$N_{treatments}$	125	127	142				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
New fact (where fact present)	-1.0 (0.8)	0.3 (0.4)	-0.0 (0.1)	-0.0 (0.1)	1.2 (0.8)	0.9 (0.8)	-0.3 (0.4)
Intercept	2.1 (1.1)	<b>2.3 (0.6)</b>	<b>0.8 (0.2)</b>				
Race: Other		-0.6 (0.6)					
Race: Gov	-0.9 (1.2)						
Race: GA Runoff		<b>-0.9 (0.4)</b>					
Race: StateLeg	-0.3 (2.2)	<b>-2.0 (0.5)</b>					
Primary focus: Candidate	-0.0 (1.1)	-0.0 (0.4)	-0.1 (0.2)				
Primary focus: Issues	1.8 (1.0)	-0.9 (0.5)	0.2 (0.2)				
$\hat{R}^2$ (all vs. control)	0.06	< 0	< 0				$p = 0.325$
$\hat{R}^2$ (all predictors)	0.08	0.17	0.07				
$\hat{\sigma}$	1.33	0.49	0.30				
$N_{treatments}$	94	170	236				



**Table DA9:** Metaregressions table “Fact type”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Candidate facts	<b>2.0 (0.8)</b>	<b>1.3 (0.5)</b>	-0.1 (0.2)	0.2 (0.2)	-0.6 (0.9)	<b>-2.1 (0.8)</b>	<b>-1.4 (0.5)</b>
Policy facts	-0.3 (0.7)	-0.0 (0.6)	0.3 (0.2)	0.2 (0.2)	0.3 (0.9)	0.6 (0.7)	0.3 (0.6)
Intercept	-0.7 (0.7)	<b>2.3 (0.7)</b>	<b>0.8 (0.2)</b>				
Race: Other		<b>-1.2 (0.6)</b>					
Race: Gov	<b>1.6 (0.7)</b>						
Race: StateLeg	0.4 (1.0)	<b>-1.4 (0.5)</b>					
Primary focus: Candidate	1.5 (0.8)	-0.3 (0.6)	-0.0 (0.2)				
Primary focus: Issues	<b>3.1 (0.9)</b>	-0.8 (0.8)	0.3 (0.2)				
$\hat{R}^2$ (all vs. control)	0.05	0.02	< 0				$p = 0.007$
$\hat{R}^2$ (all predictors)	0.40	0.13	0.21				
$\hat{\sigma}$	1.29	0.79	0.39				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Candidate facts	1.4 (0.9)	<b>1.0 (0.4)</b>	-0.2 (0.2)	0.1 (0.2)	-0.4 (1.0)	-1.6 (1.0)	<b>-1.2 (0.4)</b>
Policy facts	0.2 (0.9)	-0.2 (0.4)	<b>0.5 (0.2)</b>	<b>0.3 (0.2)</b>	-0.4 (1.0)	0.3 (0.9)	0.7 (0.5)
Intercept	0.4 (0.9)	<b>1.8 (0.5)</b>	<b>1.0 (0.2)</b>				
Race: Other		-0.6 (0.5)					
Race: Gov	-0.5 (1.2)						
Race: GA Runoff		<b>-0.9 (0.4)</b>					
Race: StateLeg	0.3 (2.2)	<b>-2.0 (0.5)</b>					
Primary focus: Candidate	0.1 (1.1)	-0.4 (0.4)	-0.1 (0.2)				
Primary focus: Issues	<b>2.3 (1.1)</b>	-0.1 (0.6)	<b>-0.4 (0.2)</b>				
$\hat{R}^2$ (all vs. control)	< 0	0.28	0.10				$p = 0.028$
$\hat{R}^2$ (all predictors)	0.13	0.37	0.08				
$\hat{\sigma}$	1.32	0.37	0.33				
$N_{treatments}$	101	181	292				

**Table DA10:** Metaregressions table “Persuasive techniques”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Neg. name-calling	0.7 (0.8)	0.4 (0.5)	-0.0 (0.3)	0.1 (0.2)	-0.3 (1.0)	-0.7 (0.9)	-0.4 (0.5)
Neg. testimonial	1.1 (0.7)	0.6 (0.4)	-0.0 (0.2)	0.1 (0.2)	-0.5 (0.8)	-1.1 (0.7)	-0.6 (0.5)
Neg. transfer of association	0.1 (0.7)	0.4 (0.4)	-0.0 (0.2)	0.1 (0.2)	0.3 (0.8)	-0.1 (0.7)	-0.4 (0.5)
Plain folks	-0.2 (0.7)	0.2 (0.6)	0.2 (0.2)	0.2 (0.2)	0.4 (0.9)	0.4 (0.8)	0.1 (0.6)
Pos. name-calling	0.6 (1.8)	-0.7 (0.7)	-0.2 (0.3)	-0.3 (0.2)	-1.3 (2.0)	-0.8 (1.9)	0.5 (0.8)
Pos. testimonial	0.7 (1.0)	-0.4 (0.6)	0.2 (0.2)	0.2 (0.2)	-1.2 (1.1)	-0.5 (1.0)	0.6 (0.6)
Pos. transfer of association	-0.2 (0.8)	-0.5 (0.6)	0.0 (0.2)	-0.0 (0.2)	-0.2 (1.0)	0.3 (0.8)	0.5 (0.7)
Intercept	<b>1.8 (0.7)</b>	<b>1.4 (0.4)</b>	<b>0.9 (0.1)</b>				
Race: Other		-0.9 (0.6)					
Race: Gov	<b>2.3 (0.7)</b>						
Race: StateLeg	0.3 (1.0)	-0.7 (0.5)					
$\hat{R}^2$ (all vs. control)	< 0	< 0	< 0				$p = 0.477$
$\hat{R}^2$ (all predictors)	0.22	< 0	< 0				
$\hat{\sigma}$	1.47	0.86	0.46				
$N_{treatments}$	131	131	170				
Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Neg. name-calling	0.8 (1.1)	-0.2 (0.4)	0.1 (0.2)	0.1 (0.2)	-1.1 (1.1)	-0.7 (1.1)	0.4 (0.4)
Neg. testimonial	1.0 (0.8)	0.6 (0.3)	-0.0 (0.2)	0.1 (0.1)	-0.4 (0.9)	-1.1 (0.8)	-0.7 (0.4)
Neg. transfer of association	-0.2 (0.8)	0.0 (0.4)	0.1 (0.2)	0.1 (0.2)	0.2 (0.9)	0.3 (0.9)	0.0 (0.4)
Plain folks	1.2 (0.8)	<b>0.9 (0.4)</b>	0.3 (0.2)	<b>0.4 (0.2)</b>	-0.3 (0.9)	-0.9 (0.9)	-0.6 (0.5)
Pos. name-calling	-2.0 (2.8)	-0.4 (0.6)	0.1 (0.2)	-0.0 (0.2)	1.6 (2.8)	2.1 (2.8)	0.5 (0.7)
Pos. testimonial	-1.8 (1.3)	-0.3 (0.4)	0.2 (0.2)	0.1 (0.1)	1.5 (1.4)	1.9 (1.3)	0.4 (0.5)
Pos. transfer of association	0.9 (1.1)	<b>1.0 (0.5)</b>	0.0 (0.2)	0.2 (0.2)	0.1 (1.1)	-0.8 (1.1)	-0.9 (0.5)
Intercept	1.4 (0.8)	<b>1.3 (0.4)</b>	<b>0.7 (0.1)</b>				
Race: Other		-1.0 (0.6)					
Race: Gov	-0.6 (1.2)						
Race: GA Runoff		<b>-0.9 (0.4)</b>					
Race: StateLeg	-0.9 (2.3)	<b>-1.5 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.00	0.40	< 0				$p = 0.212$
$\hat{R}^2$ (all predictors)	< 0	0.52	< 0				
$\hat{\sigma}$	1.43	0.33	0.37				
$N_{treatments}$	101	181	292				

**Table DA11:** Metaregressions table “Specificity: Candidate attribute”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Specificity: Candidate facts	-0.1 (0.8)	<b>1.7 (0.5)</b>	-0.2 (0.2)	-0.0 (0.2)	1.8 (1.0)	-0.1 (0.8)	<b>-2.0 (0.5)</b>
Intercept	<b>2.5 (0.6)</b>	<b>1.6 (0.5)</b>	<b>0.9 (0.1)</b>				
Race: Other		-1.7 (0.9)					
Race: Gov	<b>4.9 (1.1)</b>						
Race: StateLeg		<b>-1.7 (0.7)</b>					
$\hat{R}^2$ (all vs. control)	< 0	0.34	0.08				$p = 0.001$
$\hat{R}^2$ (all predictors)	0.59	0.39	0.08				
$\hat{\sigma}$	1.49	0.80	0.31				
$N_{treatments}$	30	45	66				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Specificity: Candidate facts	1.3 (1.0)	0.4 (0.5)	-0.3 (0.2)	-0.2 (0.2)	-0.9 (1.1)	-1.7 (1.0)	-0.8 (0.5)
Intercept	1.3 (0.8)	<b>1.7 (0.6)</b>	<b>0.9 (0.1)</b>				
Race: Other		-1.2 (0.9)					
Race: GA Runoff		-0.4 (0.7)					
Race: StateLeg		<b>-2.2 (0.8)</b>					
$\hat{R}^2$ (all vs. control)	< 0	0.02	0.02				$p = 0.107$
$\hat{R}^2$ (all predictors)	< 0	0.20	0.02				
$\hat{\sigma}$	1.92	0.82	0.47				
$N_{treatments}$	22	66	118				

**Table DA12:** Metaregressions table “Specificity: Issue fact”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Specificity: Policy facts	-0.2 (0.6)	0.5 (0.4)	<b>0.4 (0.2)</b>	<b>0.4 (0.1)</b>	0.7 (0.7)	0.6 (0.7)	-0.1 (0.4)
Intercept	<b>2.8 (0.5)</b>	<b>1.4 (0.3)</b>	<b>1.1 (0.1)</b>				
Race: Other		-0.9 (0.7)					
Race: Gov	1.5 (0.8)						
Race: StateLeg	-1.3 (1.9)	<b>-1.5 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	< 0	< 0	0.24				$p = 0.632$
$\hat{R}^2$ (all predictors)	0.17	0.11	0.24				
$\hat{\sigma}$	1.77	0.78	0.30				
$N_{treatments}$	63	88	69				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Specificity: Policy facts	-0.2 (0.8)	-0.0 (0.3)	0.2 (0.1)	0.1 (0.1)	0.1 (0.9)	0.4 (0.8)	0.2 (0.3)
Intercept	<b>3.1 (0.7)</b>	<b>1.8 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		-0.3 (0.6)					
Race: Gov	-2.1 (1.4)						
Race: GA Runoff		<b>-1.4 (0.5)</b>					
Race: StateLeg	-1.4 (3.3)	<b>-2.2 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	< 0	< 0	0.10				$p = 0.747$
$\hat{R}^2$ (all predictors)	< 0	0.56	0.10				
$\hat{\sigma}$	1.95	0.27	0.26				
$N_{treatments}$	44	106	120				

**Table DA13:** Metaregressions table “Production value”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Production value: High	0.6 (0.6)	<b>1.4 (0.5)</b>	-0.1 (0.2)	0.1 (0.2)	0.8 (0.8)	-0.7 (0.6)	<b>-1.5 (0.6)</b>
Intercept	<b>1.8 (0.5)</b>	0.6 (0.5)	<b>1.0 (0.1)</b>				
Race: Other		-1.0 (0.5)					
Race: Gov	<b>2.2 (0.7)</b>						
Race: StateLeg	0.3 (1.0)	-0.7 (0.4)					
$\hat{R}^2$ (all vs. control)	< 0	0.10	< 0				$p = 0.027$
$\hat{R}^2$ (all predictors)	0.27	0.13	< 0				
$\hat{\sigma}$	1.43	0.79	0.44				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Production value: High	0.4 (0.8)	<b>0.8 (0.4)</b>	-0.0 (0.1)	0.1 (0.1)	0.4 (0.9)	-0.4 (0.8)	<b>-0.9 (0.4)</b>
Intercept	<b>2.0 (0.6)</b>	<b>1.0 (0.4)</b>	<b>0.9 (0.1)</b>				
Race: Other		-0.3 (0.5)					
Race: Gov	-0.3 (1.2)						
Race: GA Runoff		-0.5 (0.4)					
Race: StateLeg	-0.3 (2.2)	<b>-1.6 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	< 0	0.14	< 0				$p = 0.132$
$\hat{R}^2$ (all predictors)	< 0	0.31	< 0				
$\hat{\sigma}$	1.45	0.39	0.35				
$N_{treatments}$	101	181	292				

**Table DA14:** Metaregressions table “Messenger: politician”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Messenger: Politician	<b>2.1 (0.8)</b>	0.7 (0.6)	-0.3 (0.2)	-0.1 (0.2)	-1.4 (1.0)	<b>-2.4 (0.8)</b>	-1.0 (0.6)
Intercept	<b>2.1 (0.3)</b>	<b>1.7 (0.2)</b>	<b>1.0 (0.1)</b>				
Race: Other		<b>-1.1 (0.6)</b>					
Race: Gov	<b>1.8 (0.7)</b>						
Race: StateLeg	0.3 (1.0)	-0.9 (0.4)					
$\hat{R}^2$ (all vs. control)	0.05	0.03	0.05				$p = 0.005$
$\hat{R}^2$ (all predictors)	0.31	0.07	0.05				
$\hat{\sigma}$	1.39	0.82	0.43				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Messenger: Politician	-0.3 (1.4)	0.7 (0.5)	-0.1 (0.2)	0.0 (0.2)	0.9 (1.5)	0.2 (1.4)	-0.7 (0.5)
Intercept	<b>2.3 (0.4)</b>	<b>1.7 (0.3)</b>	<b>0.9 (0.1)</b>				
Race: Other		-0.3 (0.5)					
Race: Gov	-0.4 (1.2)						
Race: GA Runoff		-0.7 (0.4)					
Race: StateLeg	-0.2 (2.2)	<b>-1.7 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	< 0	0.00	< 0				$p = 0.362$
$\hat{R}^2$ (all predictors)	< 0	0.20	< 0				
$\hat{\sigma}$	1.44	0.42	0.35				
$N_{treatments}$	101	181	292				

**Table DA15:** Metaregressions table “Messenger: female”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Messenger: Female	0.1 (0.4)	0.2 (0.3)	<b>0.3 (0.1)</b>	<b>0.3 (0.1)</b>	0.1 (0.6)	0.2 (0.5)	0.1 (0.4)
Intercept	<b>2.2 (0.3)</b>	<b>1.6 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		-1.1 (0.6)					
Race: Gov	<b>2.3 (0.7)</b>						
Race: StateLeg	0.2 (1.0)	<b>-0.9 (0.4)</b>					
$\hat{R}^2$ (all vs. control)	< 0	< 0	0.10				$p = 0.876$
$\hat{R}^2$ (all predictors)	0.26	0.04	0.10				
$\hat{\sigma}$	1.44	0.83	0.42				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Messenger: Female	1.1 (0.6)	-0.3 (0.3)	<b>0.2 (0.1)</b>	0.2 (0.1)	<b>-1.4 (0.6)</b>	-0.8 (0.6)	<b>0.6 (0.3)</b>
Intercept	<b>2.0 (0.4)</b>	<b>2.0 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		-0.5 (0.5)					
Race: Gov	-0.7 (1.2)						
Race: GA Runoff		<b>-0.8 (0.4)</b>					
Race: StateLeg	-0.8 (2.2)	<b>-1.8 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.03	0.03	0.09				$p = 0.048$
$\hat{R}^2$ (all predictors)	0.01	0.22	0.09				
$\hat{\sigma}$	1.41	0.42	0.33				
$N_{treatments}$	101	181	292				

**Table DA16:** Metaregressions table “Explicit vote for”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Explicit vote for	<b>1.1 (0.6)</b>	<b>-1.1 (0.4)</b>	0.3 (0.2)	0.1 (0.2)	<b>-2.2 (0.7)</b>	-0.8 (0.6)	<b>1.4 (0.5)</b>
Intercept	<b>1.9 (0.3)</b>	<b>2.5 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		<b>-1.6 (0.6)</b>					
Race: Gov	<b>2.0 (0.7)</b>						
Race: StateLeg	-0.2 (1.0)	<b>-1.2 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.07	0.02	0.01				$p = 0.001$
$\hat{R}^2$ (all predictors)	0.33	0.06	0.01				
$\hat{\sigma}$	1.37	0.82	0.44				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Explicit vote for	<b>1.9 (0.7)</b>	0.2 (0.4)	0.3 (0.2)	<b>0.3 (0.1)</b>	<b>-1.8 (0.8)</b>	<b>-1.7 (0.7)</b>	0.1 (0.4)
Intercept	<b>1.8 (0.4)</b>	<b>1.6 (0.4)</b>	<b>0.7 (0.1)</b>				
Race: Other		-0.4 (0.5)					
Race: Gov	-0.8 (1.2)						
Race: GA Runoff		-0.7 (0.4)					
Race: StateLeg	-0.6 (2.2)	<b>-1.7 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.24	< 0	0.01				$p = 0.056$
$\hat{R}^2$ (all predictors)	0.22	0.17	0.01				
$\hat{\sigma}$	1.25	0.43	0.34				
$N_{treatments}$	101	181	292				

**Table DA17:** Metaregressions table “Emotion: enthusiasm”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Emotion: Enthusiasm	0.9 (0.7)	-0.7 (0.4)	-0.1 (0.1)	-0.1 (0.1)	-1.6 (0.8)	-1.0 (0.8)	0.6 (0.4)
Intercept	<b>2.1 (0.3)</b>	<b>1.9 (0.2)</b>	<b>1.0 (0.1)</b>				
Race: Other		-0.9 (0.6)					
Race: Gov	<b>2.0 (0.7)</b>						
Race: StateLeg	-0.0 (1.0)	-0.8 (0.4)					
$\hat{R}^2$ (all vs. control)	< 0	< 0	< 0				$p = 0.140$
$\hat{R}^2$ (all predictors)	0.26	0.04	< 0				
$\hat{\sigma}$	1.44	0.83	0.44				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Emotion: Enthusiasm	-0.3 (1.2)	0.0 (0.3)	0.1 (0.1)	0.1 (0.1)	0.3 (1.2)	0.4 (1.2)	0.1 (0.4)
Intercept	<b>2.3 (0.4)</b>	<b>1.7 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		-0.4 (0.5)					
Race: Gov	-0.3 (1.2)						
Race: GA Runoff		-0.7 (0.4)					
Race: StateLeg	-0.2 (2.2)	<b>-1.8 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	< 0	< 0	< 0				$p = 0.924$
$\hat{R}^2$ (all predictors)	< 0	0.15	< 0				
$\hat{\sigma}$	1.44	0.43	0.35				
$N_{treatments}$	101	181	292				

**Table DA18:** Metaregressions table “Emotion: anger”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Emotion: Anger	0.8 (0.8)	<b>1.0 (0.5)</b>	-0.1 (0.2)	0.1 (0.2)	0.2 (1.0)	-0.9 (0.9)	<b>-1.1 (0.5)</b>
Intercept	<b>2.0 (0.3)</b>	<b>1.5 (0.2)</b>	<b>1.0 (0.1)</b>				
Race: Other		-1.1 (0.6)					
Race: Gov	<b>2.4 (0.7)</b>						
Race: StateLeg	0.1 (1.0)	<b>-0.9 (0.4)</b>					
$\hat{R}^2$ (all vs. control)	< 0	0.05	< 0				$p = 0.056$
$\hat{R}^2$ (all predictors)	0.27	0.08	< 0				
$\hat{\sigma}$	1.43	0.81	0.44				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Emotion: Anger	<b>3.0 (1.0)</b>	0.4 (0.4)	0.2 (0.2)	0.3 (0.2)	<b>-2.6 (1.0)</b>	<b>-2.8 (1.0)</b>	-0.2 (0.4)
Intercept	<b>1.7 (0.4)</b>	<b>1.6 (0.3)</b>	<b>0.8 (0.1)</b>				
Race: Other		-0.4 (0.5)					
Race: Gov	0.1 (1.2)						
Race: GA Runoff		-0.7 (0.4)					
Race: StateLeg	-0.7 (2.2)	<b>-1.7 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.18	0.03	< 0				$p = 0.018$
$\hat{R}^2$ (all predictors)	0.17	0.22	< 0				
$\hat{\sigma}$	1.29	0.42	0.34				
$N_{treatments}$	101	181	292				

**Table DA19:** Metaregressions table “Primary tone”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Primary tone: Contrast	0.4 (0.7)	-0.2 (0.4)	0.2 (0.2)	0.1 (0.2)	-0.6 (0.8)	-0.2 (0.8)	0.4 (0.5)
Primary tone: Positive	0.1 (0.7)	<b>-1.2 (0.4)</b>	0.0 (0.2)	-0.1 (0.2)	-1.3 (0.8)	-0.1 (0.7)	<b>1.2 (0.5)</b>
Intercept	<b>2.2 (0.3)</b>	<b>2.0 (0.2)</b>	<b>0.9 (0.1)</b>				
Race: Other		<b>-1.2 (0.6)</b>					
Race: Gov	<b>2.3 (0.7)</b>						
Race: StateLeg	0.1 (1.0)	<b>-0.9 (0.4)</b>					
$\hat{R}^2$ (all vs. control)	< 0	0.12	< 0				$p = 0.136$
$\hat{R}^2$ (all predictors)	0.24	0.16	< 0				
$\hat{\sigma}$	1.45	0.78	0.44				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Primary tone: Contrast	0.6 (1.0)	-0.5 (0.4)	<b>0.7 (0.2)</b>	<b>0.5 (0.2)</b>	-1.1 (1.1)	0.1 (1.0)	<b>1.1 (0.4)</b>
Primary tone: Positive	-1.4 (0.9)	0.2 (0.3)	0.3 (0.1)	0.2 (0.1)	1.6 (1.0)	1.7 (1.0)	0.1 (0.4)
Intercept	<b>2.4 (0.4)</b>	<b>1.7 (0.3)</b>	<b>0.6 (0.1)</b>				
Race: Other		-0.4 (0.5)					
Race: Gov	0.0 (1.2)						
Race: GA Runoff		-0.8 (0.4)					
Race: StateLeg	-0.3 (2.2)	<b>-1.8 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.06	0.02	0.12				$p = 0.033$
$\hat{R}^2$ (all predictors)	0.04	0.21	0.12				
$\hat{\sigma}$	1.39	0.42	0.32				
$N_{treatments}$	101	181	292				

**Table DA20:** Metaregressions table “Cited fact (where fact present)”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Cited fact (where fact present)	<b>-1.1 (0.5)</b>	0.5 (0.4)	-0.1 (0.1)	-0.1 (0.1)	<b>1.6 (0.6)</b>	1.0 (0.5)	-0.5 (0.4)
Intercept	0.6 (0.8)	<b>2.8 (0.7)</b>	<b>0.8 (0.2)</b>				
Race: Other		-1.0 (0.6)					
Race: Gov	<b>1.5 (0.7)</b>						
Race: StateLeg	0.1 (1.0)	<b>-1.4 (0.5)</b>					
Primary focus: Candidate	<b>1.8 (0.8)</b>	0.2 (0.5)	-0.2 (0.2)				
Primary focus: Issues	<b>2.2 (0.8)</b>	<b>-1.6 (0.6)</b>	<b>0.4 (0.2)</b>				
$\hat{R}^2$ (all vs. control)	0.08	< 0	< 0				$p = 0.047$
$\hat{R}^2$ (all predictors)	0.37	0.11	0.22				
$\hat{\sigma}$	1.34	0.80	0.37				
$N_{treatments}$	125	127	155				
Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Cited fact (where fact present)	-0.5 (0.7)	0.1 (0.3)	-0.2 (0.1)	-0.1 (0.1)	0.6 (0.7)	0.4 (0.7)	-0.3 (0.3)
Intercept	1.8 (1.0)	<b>2.2 (0.6)</b>	<b>0.9 (0.2)</b>				
Race: Other		-0.6 (0.6)					
Race: Gov	-0.8 (1.2)						
Race: GA Runoff		<b>-1.0 (0.4)</b>					
Race: StateLeg	0.0 (2.2)	<b>-1.9 (0.5)</b>					
Primary focus: Candidate	-0.2 (1.0)	-0.0 (0.4)	-0.1 (0.2)				
Primary focus: Issues	1.5 (1.0)	-0.6 (0.5)	0.1 (0.2)				
$\hat{R}^2$ (all vs. control)	0.02	< 0	0.00				$p = 0.631$
$\hat{R}^2$ (all predictors)	0.05	0.06	0.00				
$\hat{\sigma}$	1.35	0.52	0.34				
$N_{treatments}$	94	172	261				

**Table DA21:** Metaregressions table “Pushiness”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
How pushy	<b>0.9 (0.3)</b>	<b>0.3 (0.1)</b>	<b>0.3 (0.1)</b>	-0.6 (0.3)
Intercept	<b>1.2 (0.3)</b>	<b>0.8 (0.1)</b>		
Race: Other	-0.8 (0.6)			
Race: StateLeg	<b>-0.9 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	0.07	0.06		$p = 0.079$
$\hat{R}^2$ (all predictors)	0.11	0.06		
$\hat{\sigma}$	0.80	0.43		
$N_{treatments}$	131	170		

Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
How pushy	0.2 (0.2)	<b>0.2 (0.1)</b>	<b>0.2 (0.1)</b>	0.0 (0.3)
Intercept	<b>1.6 (0.3)</b>	<b>0.7 (0.1)</b>		
Race: Other	-0.4 (0.5)			
Race: GA Runoff	-0.7 (0.4)			
Race: StateLeg	<b>-1.7 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	< 0	0.11		$p = 0.902$
$\hat{R}^2$ (all predictors)	0.12	0.11		
$\hat{\sigma}$	0.44	0.32		
$N_{treatments}$	181	292		

**Table DA22:** Metaregressions table “Messenger: Republican”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Messenger: Republican	2.6 (1.3)	-0.1 (0.2)	-0.0 (0.2)	-2.7 (1.4)
Intercept	<b>1.7 (0.2)</b>	<b>1.0 (0.1)</b>		
Race: Other	<b>-1.1 (0.5)</b>			
Race: StateLeg	<b>-0.9 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	0.05	< 0		$p = 0.051$
$\hat{R}^2$ (all predictors)	0.08	< 0		
$\hat{\sigma}$	0.81	0.44		
$N_{treatments}$	131	170		

Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Messenger: Republican	<b>1.7 (0.6)</b>	0.2 (0.2)	0.3 (0.2)	<b>-1.4 (0.7)</b>
Intercept	<b>1.7 (0.3)</b>	<b>0.8 (0.1)</b>		
Race: Other	-0.4 (0.5)			
Race: GA Runoff	<b>-0.9 (0.4)</b>			
Race: StateLeg	<b>-1.7 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	0.20	< 0		$p = 0.031$
$\hat{R}^2$ (all predictors)	0.36	< 0		
$\hat{\sigma}$	0.38	0.35		
$N_{treatments}$	181	292		



**Table DA23:** Metaregressions table “Messenger: Healthcare worker”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Messenger: Healthcare worker	-1.0 (0.7)	0.2 (0.4)	-0.1 (0.3)	1.2 (0.8)
Intercept	<b>1.8 (0.2)</b>	<b>1.0 (0.1)</b>		
Race: Other	-1.0 (0.6)			
Race: StateLeg	<b>-1.0 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	< 0	< 0		$p = 0.129$
$\hat{R}^2$ (all predictors)	0.02	< 0		
$\hat{\sigma}$	0.84	0.44		
$N_{treatments}$	131	170		
Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Messenger: Healthcare worker	0.0 (0.5)	0.5 (0.4)	0.3 (0.3)	0.5 (0.6)
Intercept	<b>1.7 (0.3)</b>	<b>0.8 (0.1)</b>		
Race: Other	-0.4 (0.5)			
Race: GA Runoff	-0.7 (0.4)			
Race: StateLeg	<b>-1.8 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	< 0	0.01		$p = 0.442$
$\hat{R}^2$ (all predictors)	0.16	0.01		
$\hat{\sigma}$	0.43	0.34		
$N_{treatments}$	181	292		

**Table DA24:** Metaregressions table “Messenger: Everyday people”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Messenger: Everyday people	0.4 (0.4)	0.2 (0.1)	0.2 (0.1)	-0.1 (0.4)
Intercept	<b>1.6 (0.3)</b>	<b>0.9 (0.1)</b>		
Race: Other	<b>-1.2 (0.6)</b>			
Race: StateLeg	<b>-0.9 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	< 0	0.04		$p = 0.732$
$\hat{R}^2$ (all predictors)	0.03	0.04		
$\hat{\sigma}$	0.84	0.43		
$N_{treatments}$	131	170		
Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Messenger: Everyday people	-0.1 (0.3)	0.1 (0.1)	0.1 (0.1)	0.2 (0.3)
Intercept	<b>1.8 (0.3)</b>	<b>0.8 (0.1)</b>		
Race: Other	-0.3 (0.5)			
Race: GA Runoff	-0.7 (0.4)			
Race: StateLeg	<b>-1.7 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	< 0	< 0		$p = 0.505$
$\hat{R}^2$ (all predictors)	0.18	< 0		
$\hat{\sigma}$	0.43	0.34		
$N_{treatments}$	181	292		

**Table DA25:** Metaregressions table “Issue: Decency”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Issue: Decency	<b>1.9 (0.5)</b>	<b>-0.3 (0.1)</b>	-0.2 (0.1)	<b>-2.2 (0.5)</b>
Intercept	<b>1.6 (0.2)</b>	<b>1.1 (0.1)</b>		
Race: Other	<b>-1.4 (0.5)</b>			
Race: StateLeg	<b>-1.3 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	0.25	0.06		$p = 0.000$
$\hat{R}^2$ (all predictors)	0.28	0.06		
$\hat{\sigma}$	0.72	0.43		
$N_{treatments}$	131	170		
Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Issue: Decency	0.6 (0.4)	0.1 (0.1)	0.1 (0.1)	-0.5 (0.5)
Intercept	<b>1.7 (0.3)</b>	<b>0.8 (0.1)</b>		
Race: Other	-0.5 (0.5)			
Race: GA Runoff	-0.7 (0.4)			
Race: StateLeg	<b>-1.9 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	0.07	< 0		$p = 0.240$
$\hat{R}^2$ (all predictors)	0.26	< 0		
$\hat{\sigma}$	0.41	0.35		
$N_{treatments}$	181	292		

**Table DA26:** Metaregressions table “Issue: COVID-19”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Issue: COVID-19	<b>-0.8 (0.4)</b>	0.2 (0.1)	0.0 (0.1)	<b>1.0 (0.4)</b>
Intercept	<b>2.0 (0.2)</b>	<b>0.9 (0.1)</b>		
Race: Other	<b>-1.2 (0.6)</b>			
Race: StateLeg	<b>-0.9 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	0.02	0.03		$p = 0.009$
$\hat{R}^2$ (all predictors)	0.06	0.03		
$\hat{\sigma}$	0.82	0.43		
$N_{treatments}$	131	170		
Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Issue: COVID-19	-0.1 (0.3)	-0.1 (0.1)	-0.1 (0.1)	-0.0 (0.3)
Intercept	<b>1.7 (0.3)</b>	<b>0.9 (0.1)</b>		
Race: Other	-0.4 (0.5)			
Race: GA Runoff	-0.7 (0.4)			
Race: StateLeg	<b>-1.7 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	< 0	< 0		$p = 0.998$
$\hat{R}^2$ (all predictors)	0.15	< 0		
$\hat{\sigma}$	0.43	0.35		
$N_{treatments}$	181	292		

**Table DA27:** Metaregressions table “Issue: BLM/Race”. See DA 2 for details.

Metaregressions with “Favorability” outcome

Predictor	2020D	2020P	Combined	2020P-2020D
Issue: BLM/Race	0.0 (1.3)	-0.3 (0.2)	-0.3 (0.2)	-0.3 (1.3)
Intercept	<b>1.8 (0.2)</b>	<b>1.0 (0.1)</b>		
Race: Other	<b>-1.2 (0.6)</b>			
Race: StateLeg	<b>-0.9 (0.4)</b>			
$\hat{R}^2$ (all vs. control)	< 0	0.07		$p = 0.791$
$\hat{R}^2$ (all predictors)	0.01	0.07		
$\hat{\sigma}$	0.85	0.42		
$N_{treatments}$	131	170		

Metaregressions with “Vote choice” outcome

Predictor	2020D	2020P	Combined	2020P-2020D
Issue: BLM/Race	0.1 (0.6)	-0.1 (0.1)	-0.1 (0.1)	-0.2 (0.6)
Intercept	<b>1.7 (0.3)</b>	<b>0.9 (0.1)</b>		
Race: Other	-0.4 (0.5)			
Race: GA Runoff	-0.7 (0.4)			
Race: StateLeg	<b>-1.8 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	< 0	< 0		$p = 0.746$
$\hat{R}^2$ (all predictors)	0.14	< 0		
$\hat{\sigma}$	0.44	0.34		
$N_{treatments}$	181	292		

**Table DA28:** Metaregressions table “All primary”. See [DA 2](#) for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Candidate facts	<b>2.0 (0.8)</b>	<b>1.2 (0.6)</b>	-0.2 (0.2)	0.2 (0.2)	-0.8 (0.9)	<b>-2.1 (0.8)</b>	<b>-1.4 (0.6)</b>
Emotion: Anger	-0.8 (0.9)	0.6 (0.5)	-0.1 (0.2)	-0.0 (0.2)	1.4 (1.0)	0.7 (0.9)	-0.7 (0.5)
Explicit vote for	1.2 (0.6)	<b>-1.3 (0.4)</b>	0.2 (0.2)	0.0 (0.2)	<b>-2.5 (0.8)</b>	-1.1 (0.7)	<b>1.4 (0.5)</b>
New fact	-0.6 (0.6)	<b>1.1 (0.5)</b>	0.2 (0.2)	0.2 (0.2)	<b>1.7 (0.8)</b>	0.7 (0.7)	-0.9 (0.5)
Messenger: Politician	<b>2.9 (0.9)</b>	-0.0 (0.6)	-0.1 (0.2)	0.0 (0.2)	<b>-2.9 (1.1)</b>	<b>-3.0 (0.9)</b>	-0.1 (0.7)
Policy facts	-0.1 (0.7)	0.0 (0.6)	0.2 (0.2)	0.1 (0.2)	0.1 (0.9)	0.3 (0.8)	0.2 (0.6)
Primary focus: Candidate	0.8 (0.9)	0.1 (0.6)	-0.0 (0.2)	0.0 (0.2)	-0.7 (1.1)	-0.8 (0.9)	-0.1 (0.7)
Primary focus: Issues	<b>3.1 (0.9)</b>	-1.0 (0.8)	0.2 (0.2)	0.3 (0.2)	<b>-4.1 (1.2)</b>	<b>-2.9 (0.9)</b>	1.3 (0.8)
Neg. name-calling	0.7 (0.8)	-0.4 (0.5)	0.1 (0.3)	0.1 (0.2)	-1.1 (0.9)	-0.6 (0.8)	0.5 (0.6)
Neg. testimonial	1.3 (0.7)	0.4 (0.4)	0.1 (0.2)	0.2 (0.2)	-0.9 (0.8)	-1.2 (0.7)	-0.3 (0.5)
Neg. transfer of association	0.5 (0.7)	0.3 (0.4)	-0.1 (0.2)	0.0 (0.2)	-0.2 (0.8)	-0.6 (0.7)	-0.4 (0.5)
Plain folks	0.5 (0.7)	0.3 (0.6)	0.2 (0.2)	0.2 (0.2)	-0.2 (0.9)	-0.3 (0.8)	-0.1 (0.6)
Pos. name-calling	1.6 (1.7)	-0.7 (0.7)	-0.1 (0.3)	-0.1 (0.3)	-2.3 (1.9)	-1.7 (1.7)	0.6 (0.8)
Pos. testimonial	1.0 (0.9)	-0.0 (0.6)	0.2 (0.2)	0.2 (0.2)	-1.0 (1.1)	-0.8 (0.9)	0.2 (0.7)
Pos. transfer of association	-0.8 (0.7)	-0.7 (0.6)	0.1 (0.2)	-0.0 (0.2)	0.1 (1.0)	0.9 (0.8)	0.8 (0.7)
Intercept	-1.3 (1.0)	<b>2.1 (0.8)</b>	<b>0.6 (0.2)</b>				
Race: Other		-0.9 (0.7)					
Race: Gov	0.6 (0.8)						
Race: StateLeg	0.2 (1.0)	<b>-1.6 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.34	0.16	0.12				$p = 0.000$
$\hat{R}^2$ (all predictors)	0.52	0.19	0.12				
$\hat{\sigma}$	1.15	0.76	0.41				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Candidate facts	0.8 (1.0)	0.8 (0.4)	-0.1 (0.2)	0.0 (0.2)	0.1 (1.1)	-0.9 (1.0)	<b>-1.0 (0.5)</b>
Emotion: Anger	1.0 (1.2)	0.3 (0.4)	0.3 (0.2)	0.3 (0.2)	-0.7 (1.3)	-0.7 (1.2)	-0.0 (0.5)
Explicit vote for	<b>2.0 (0.8)</b>	-0.1 (0.4)	0.3 (0.2)	0.3 (0.1)	<b>-2.1 (0.9)</b>	<b>-1.7 (0.8)</b>	0.4 (0.4)
New fact	0.4 (0.8)	0.2 (0.4)	-0.0 (0.2)	0.0 (0.1)	-0.3 (0.8)	-0.5 (0.8)	-0.2 (0.4)
Messenger: Politician	1.6 (1.5)	0.8 (0.5)	0.0 (0.2)	0.1 (0.2)	-0.8 (1.6)	-1.6 (1.5)	-0.8 (0.6)
Policy facts	-0.5 (0.9)	-0.2 (0.5)	<b>0.5 (0.2)</b>	0.3 (0.2)	0.3 (1.0)	1.0 (1.0)	0.7 (0.5)
Primary focus: Candidate	-0.5 (1.1)	-0.4 (0.5)	-0.2 (0.2)	-0.2 (0.2)	0.1 (1.2)	0.4 (1.1)	0.2 (0.5)
Primary focus: Issues	<b>2.3 (1.1)</b>	-0.2 (0.6)	<b>-0.5 (0.2)</b>	-0.3 (0.2)	-2.5 (1.3)	<b>-2.8 (1.2)</b>	-0.3 (0.6)
Neg. name-calling	0.9 (1.1)	-0.3 (0.4)	0.1 (0.2)	0.1 (0.2)	-1.2 (1.1)	-0.8 (1.1)	0.4 (0.5)
Neg. testimonial	0.9 (0.8)	0.5 (0.4)	-0.0 (0.2)	0.1 (0.1)	-0.3 (0.9)	-0.9 (0.9)	-0.6 (0.4)
Neg. transfer of association	0.4 (0.8)	-0.0 (0.4)	0.1 (0.2)	0.1 (0.2)	-0.5 (0.9)	-0.3 (0.9)	0.1 (0.4)
Plain folks	0.9 (0.9)	<b>0.9 (0.4)</b>	0.3 (0.2)	<b>0.4 (0.2)</b>	-0.0 (1.0)	-0.6 (0.9)	-0.6 (0.5)
Pos. name-calling	-1.0 (2.7)	-0.4 (0.7)	0.1 (0.2)	0.1 (0.2)	0.6 (2.8)	1.1 (2.7)	0.5 (0.7)
Pos. testimonial	-1.2 (1.3)	-0.0 (0.5)	0.2 (0.2)	0.1 (0.1)	1.2 (1.4)	1.4 (1.3)	0.2 (0.5)
Pos. transfer of association	0.4 (1.0)	0.8 (0.5)	0.0 (0.2)	0.1 (0.2)	0.4 (1.1)	-0.3 (1.1)	-0.8 (0.5)
Intercept	-0.9 (1.2)	<b>1.4 (0.6)</b>	<b>0.7 (0.2)</b>				
Race: Other		-1.0 (0.6)					
Race: Gov	-0.7 (1.2)						
Race: GA Runoff		<b>-1.1 (0.4)</b>					
Race: StateLeg	-0.9 (2.3)	<b>-1.8 (0.6)</b>					
$\hat{R}^2$ (all vs. control)	0.32	0.39	< 0				$p = 0.023$
$\hat{R}^2$ (all predictors)	0.30	0.51	< 0				
$\hat{\sigma}$	1.18	0.33	0.36				
$N_{treatments}$	101	181	292				

**Table DA29:** Metaregressions table “All primary and secondary”. See DA 2 for details.

Metaregressions with “Favorability” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Candidate facts	1.1 (1.2)	1.0 (0.7)	-0.0 (0.3)	0.2 (0.3)	-0.1 (1.4)	-1.1 (1.2)	-1.0 (0.8)
Emotion: Anger	-1.1 (1.0)	0.6 (0.5)	-0.1 (0.2)	-0.0 (0.2)	1.6 (1.1)	1.0 (1.0)	-0.6 (0.6)
Explicit vote for	1.3 (0.7)	<b>-1.2 (0.5)</b>	0.2 (0.2)	0.1 (0.2)	<b>-2.4 (0.8)</b>	-1.1 (0.7)	<b>1.3 (0.5)</b>
Cited fact	-0.3 (0.6)	0.2 (0.4)	-0.1 (0.2)	-0.1 (0.2)	0.5 (0.7)	0.2 (0.6)	-0.3 (0.5)
New fact	-0.8 (0.8)	0.7 (0.5)	0.2 (0.2)	0.2 (0.2)	1.6 (0.9)	1.0 (0.8)	-0.5 (0.6)
Specificity: Candidate facts	0.5 (0.6)	0.2 (0.5)	-0.1 (0.2)	-0.0 (0.2)	-0.3 (0.8)	-0.7 (0.6)	-0.3 (0.6)
Specificity: Policy facts	-0.1 (0.6)	0.6 (0.5)	0.4 (0.2)	<b>0.4 (0.2)</b>	0.7 (0.8)	0.5 (0.7)	-0.2 (0.5)
Messenger: Politician	<b>2.5 (1.0)</b>	0.0 (0.6)	-0.1 (0.2)	0.0 (0.2)	<b>-2.5 (1.1)</b>	<b>-2.6 (1.0)</b>	-0.1 (0.7)
Policy facts	0.1 (0.9)	-0.5 (0.7)	-0.1 (0.3)	-0.2 (0.3)	-0.6 (1.2)	-0.3 (1.0)	0.4 (0.8)
Primary focus: Candidate	0.9 (0.9)	0.1 (0.6)	0.0 (0.3)	0.1 (0.2)	-0.7 (1.1)	-0.8 (0.9)	-0.1 (0.7)
Primary focus: Issues	<b>3.2 (0.9)</b>	-0.8 (0.8)	0.2 (0.3)	0.3 (0.2)	<b>-4.0 (1.2)</b>	<b>-3.0 (0.9)</b>	1.0 (0.9)
Production value: High	0.9 (0.7)	0.8 (0.6)	0.1 (0.2)	0.2 (0.2)	-0.1 (0.9)	-0.9 (0.7)	-0.7 (0.6)
Neg. name-calling	0.9 (0.8)	-0.5 (0.5)	0.1 (0.3)	0.1 (0.2)	-1.4 (1.0)	-0.8 (0.9)	0.6 (0.6)
Neg. testimonial	<b>1.4 (0.7)</b>	0.6 (0.4)	0.1 (0.2)	0.2 (0.2)	-0.8 (0.8)	-1.3 (0.7)	-0.5 (0.5)
Neg. transfer of association	0.2 (0.7)	0.1 (0.4)	-0.1 (0.2)	-0.0 (0.2)	-0.1 (0.8)	-0.3 (0.7)	-0.2 (0.5)
Plain folks	0.4 (0.8)	0.5 (0.6)	0.2 (0.2)	0.2 (0.2)	0.1 (1.0)	-0.2 (0.8)	-0.3 (0.6)
Pos. name-calling	1.2 (1.8)	-0.7 (0.7)	-0.1 (0.3)	-0.2 (0.3)	-1.9 (2.0)	-1.4 (1.8)	0.6 (0.8)
Pos. testimonial	1.2 (0.9)	-0.0 (0.7)	0.2 (0.2)	0.2 (0.2)	-1.2 (1.2)	-1.0 (1.0)	0.2 (0.7)
Pos. transfer of association	-0.7 (0.8)	-0.6 (0.6)	0.1 (0.2)	-0.0 (0.2)	0.0 (1.0)	0.7 (0.8)	0.7 (0.7)
Intercept	-1.8 (1.1)	1.1 (1.0)	0.5 (0.3)				
Race: Other		-0.9 (0.7)					
Race: Gov	0.2 (0.8)						
Race: StateLeg	0.2 (1.0)	<b>-1.4 (0.5)</b>					
$\hat{R}^2$ (all vs. control)	0.28	0.15	0.11				$p = 0.000$
$\hat{R}^2$ (all predictors)	0.48	0.19	0.11				
$\hat{\sigma}$	1.20	0.76	0.41				
$N_{treatments}$	131	131	170				

Metaregressions with “Vote choice” outcome							
Predictor	2018	2020D	2020P	Combined	2020D-2018	2020P-2018	2020P-2020D
Candidate facts	0.2 (1.5)	1.2 (0.6)	-0.1 (0.2)	0.1 (0.2)	1.0 (1.6)	-0.3 (1.5)	-1.3 (0.6)
Emotion: Anger	0.9 (1.3)	0.2 (0.4)	0.3 (0.2)	0.3 (0.2)	-0.7 (1.3)	-0.7 (1.3)	0.0 (0.5)
Explicit vote for	<b>2.1 (0.9)</b>	-0.3 (0.4)	0.3 (0.2)	0.3 (0.2)	<b>-2.4 (0.9)</b>	<b>-1.8 (0.9)</b>	0.6 (0.4)
Cited fact	0.5 (0.8)	0.1 (0.4)	-0.2 (0.2)	-0.2 (0.2)	-0.4 (0.9)	-0.7 (0.8)	-0.3 (0.4)
New fact	-0.2 (1.0)	0.3 (0.5)	0.1 (0.2)	0.1 (0.2)	0.5 (1.1)	0.2 (1.0)	-0.3 (0.5)
Specificity: Candidate facts	0.3 (0.8)	-0.4 (0.4)	-0.1 (0.2)	-0.1 (0.2)	-0.7 (0.9)	-0.4 (0.8)	0.3 (0.5)
Specificity: Policy facts	0.5 (0.8)	-0.2 (0.4)	0.1 (0.2)	0.1 (0.2)	-0.7 (0.9)	-0.5 (0.9)	0.3 (0.5)
Messenger: Politician	1.6 (1.6)	0.6 (0.5)	0.0 (0.2)	0.1 (0.2)	-1.0 (1.7)	-1.6 (1.6)	-0.6 (0.6)
Policy facts	-1.0 (1.2)	-0.1 (0.6)	0.4 (0.3)	0.2 (0.2)	0.9 (1.4)	1.4 (1.3)	0.4 (0.6)
Primary focus: Candidate	-0.5 (1.1)	-0.4 (0.5)	-0.1 (0.2)	-0.2 (0.2)	0.1 (1.2)	0.4 (1.2)	0.3 (0.5)
Primary focus: Issues	<b>2.6 (1.2)</b>	-0.2 (0.6)	-0.4 (0.2)	-0.3 (0.2)	<b>-2.8 (1.3)</b>	<b>-3.0 (1.2)</b>	-0.2 (0.6)
Production value: High	0.5 (1.0)	<b>1.0 (0.5)</b>	0.1 (0.2)	0.2 (0.2)	0.5 (1.1)	-0.4 (1.0)	-0.9 (0.5)
Neg. name-calling	1.1 (1.1)	-0.2 (0.4)	0.1 (0.2)	0.1 (0.2)	-1.3 (1.2)	-1.0 (1.2)	0.3 (0.5)
Neg. testimonial	1.0 (0.9)	0.6 (0.4)	-0.0 (0.2)	0.1 (0.2)	-0.4 (1.0)	-1.1 (0.9)	-0.7 (0.4)
Neg. transfer of association	0.4 (0.9)	-0.1 (0.4)	0.2 (0.2)	0.1 (0.2)	-0.5 (1.0)	-0.3 (0.9)	0.2 (0.5)
Plain folks	1.0 (0.9)	<b>0.9 (0.5)</b>	0.3 (0.2)	<b>0.4 (0.2)</b>	-0.0 (1.0)	-0.6 (0.9)	-0.6 (0.5)
Pos. name-calling	-0.5 (2.9)	-0.6 (0.7)	0.1 (0.2)	0.0 (0.2)	-0.0 (3.0)	0.6 (2.9)	0.7 (0.7)
Pos. testimonial	-1.0 (1.5)	0.4 (0.5)	0.1 (0.2)	0.1 (0.2)	1.4 (1.5)	1.1 (1.5)	-0.3 (0.5)
Pos. transfer of association	0.4 (1.1)	0.8 (0.5)	-0.0 (0.2)	0.1 (0.2)	0.4 (1.2)	-0.4 (1.1)	-0.8 (0.5)
Intercept	-1.4 (1.4)	0.7 (0.7)	<b>0.7 (0.2)</b>				
Race: Other		-1.0 (0.6)					
Race: Gov	-0.8 (1.3)						
Race: GA Runoff		-0.9 (0.4)					
Race: StateLeg	-1.2 (2.4)	<b>-1.8 (0.6)</b>					
$\hat{R}^2$ (all vs. control)	0.17	0.22	< 0				$p = 0.081$
$\hat{R}^2$ (all predictors)	0.15	0.38	< 0				
$\hat{\sigma}$	1.31	0.37	0.36				
$N_{treatments}$	101	181	292				

**Table DA30:** Metaregressions table “All primary, secondary and new”. See DA 2 for details.

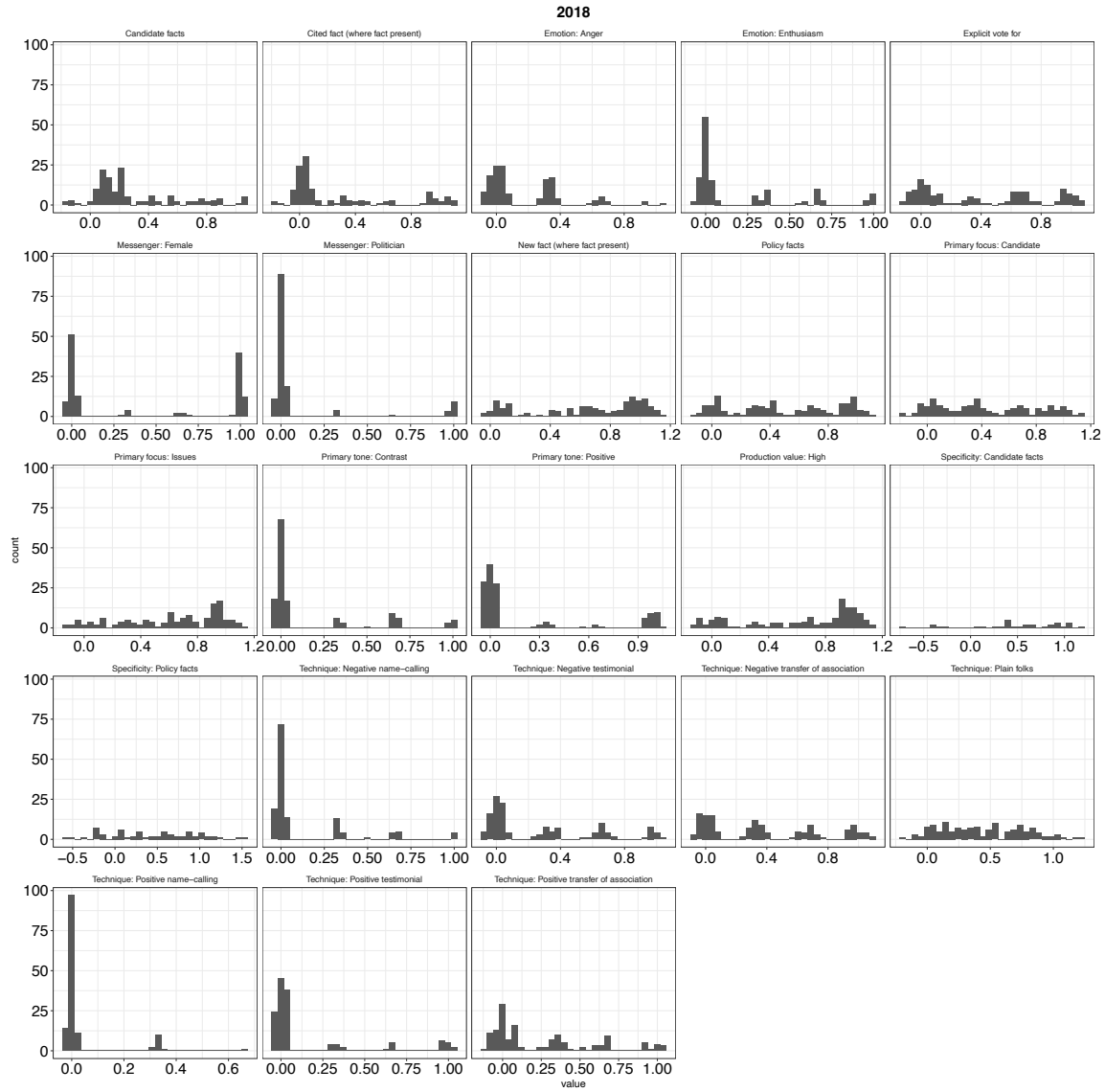
Metaregressions with “Favorability” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Issue: BLM/Race	0.4 (1.4)	-0.3 (0.2)	-0.3 (0.2)	-0.7 (1.4)
Candidate facts	0.8 (0.7)	-0.1 (0.3)	0.1 (0.3)	-0.9 (0.8)
Emotion: Anger	0.6 (0.5)	-0.1 (0.2)	0.0 (0.2)	-0.7 (0.6)
Explicit vote for	<b>-1.2 (0.5)</b>	0.0 (0.2)	-0.2 (0.2)	<b>1.2 (0.5)</b>
Cited fact	0.3 (0.4)	-0.2 (0.2)	-0.1 (0.2)	-0.5 (0.5)
New fact	0.6 (0.5)	0.2 (0.2)	0.3 (0.2)	-0.4 (0.6)
How pushy	0.1 (0.4)	<b>0.3 (0.1)</b>	<b>0.3 (0.1)</b>	0.3 (0.4)
Specificity: Candidate facts	0.2 (0.5)	-0.0 (0.2)	0.0 (0.2)	-0.2 (0.6)
Specificity: Policy facts	0.8 (0.5)	0.3 (0.2)	0.4 (0.2)	-0.4 (0.6)
Issue: COVID-19	-0.1 (0.4)	0.0 (0.2)	0.0 (0.2)	0.1 (0.5)
Issue: Decency	1.2 (0.8)	-0.0 (0.2)	0.0 (0.2)	-1.3 (0.8)
Messenger: Everyday people	0.8 (0.5)	0.3 (0.2)	0.4 (0.2)	-0.5 (0.6)
Messenger: Healthcare worker	-0.3 (0.9)	0.1 (0.4)	0.0 (0.4)	0.4 (1.0)
Messenger: Politician	0.4 (0.7)	0.1 (0.2)	0.1 (0.2)	-0.3 (0.7)
Messenger: Republican	0.7 (1.4)	-0.2 (0.3)	-0.2 (0.3)	-0.9 (1.5)
Policy facts	-0.7 (0.8)	0.0 (0.3)	-0.1 (0.3)	0.7 (0.8)
Primary focus: Candidate	0.0 (0.7)	0.1 (0.3)	0.1 (0.2)	0.0 (0.7)
Primary focus: Issues	-0.3 (0.9)	0.2 (0.3)	0.2 (0.3)	0.5 (0.9)
Production value: High	0.8 (0.6)	0.1 (0.2)	0.2 (0.2)	-0.7 (0.6)
Neg. name-calling	-0.3 (0.6)	0.1 (0.3)	0.0 (0.2)	0.4 (0.6)
Neg. testimonial	0.5 (0.5)	-0.0 (0.2)	0.1 (0.2)	-0.5 (0.5)
Neg. transfer of association	0.1 (0.5)	-0.2 (0.2)	-0.1 (0.2)	-0.3 (0.5)
Plain folks	-0.0 (0.6)	0.2 (0.2)	0.2 (0.2)	0.3 (0.7)
Pos. name-calling	-0.8 (0.8)	-0.2 (0.3)	-0.2 (0.3)	0.6 (0.8)
Pos. testimonial	-0.1 (0.7)	0.0 (0.2)	0.0 (0.2)	0.1 (0.7)
Pos. transfer of association	-0.4 (0.7)	0.2 (0.2)	0.1 (0.2)	0.6 (0.7)
Intercept	0.4 (1.1)	0.4 (0.3)		
Race: Other	-1.0 (0.7)			
Race: StateLeg	<b>-1.6 (0.5)</b>			
$\hat{R}^2$ (all vs. control)	0.16	0.17		$p = 0.002$
$\hat{R}^2$ (all predictors)	0.20	0.17		
$\hat{\sigma}$	0.76	0.40		
$N_{treatments}$	131	170		

Metaregressions with “Vote choice” outcome				
Predictor	2020D	2020P	Combined	2020P-2020D
Issue: BLM/Race	0.8 (0.6)	-0.1 (0.2)	-0.1 (0.2)	-0.9 (0.7)
Candidate facts	<b>1.2 (0.6)</b>	-0.2 (0.2)	0.0 (0.2)	<b>-1.4 (0.7)</b>
Emotion: Anger	0.1 (0.4)	0.2 (0.2)	0.2 (0.2)	0.1 (0.5)
Explicit vote for	-0.3 (0.4)	0.1 (0.2)	0.1 (0.2)	0.4 (0.5)
Cited fact	0.0 (0.4)	-0.3 (0.2)	-0.3 (0.2)	-0.3 (0.4)
New fact	0.2 (0.5)	0.1 (0.2)	0.1 (0.2)	-0.2 (0.5)
How pushy	-0.0 (0.3)	<b>0.3 (0.1)</b>	<b>0.2 (0.1)</b>	0.3 (0.3)
Specificity: Candidate facts	-0.3 (0.5)	-0.0 (0.2)	-0.1 (0.2)	0.3 (0.5)
Specificity: Policy facts	-0.1 (0.4)	0.0 (0.2)	0.0 (0.2)	0.1 (0.5)
Issue: COVID-19	0.0 (0.3)	-0.1 (0.2)	-0.0 (0.1)	-0.1 (0.4)
Issue: Decency	-0.1 (0.5)	0.2 (0.2)	0.2 (0.2)	0.3 (0.6)
Messenger: Everyday people	-0.3 (0.4)	0.1 (0.2)	0.0 (0.2)	0.3 (0.5)
Messenger: Healthcare worker	-0.3 (0.6)	0.3 (0.4)	0.2 (0.3)	0.7 (0.7)
Messenger: Politician	0.7 (0.6)	0.1 (0.2)	0.1 (0.2)	-0.6 (0.6)
Messenger: Republican	1.4 (0.7)	0.3 (0.3)	0.4 (0.2)	-1.1 (0.8)
Policy facts	-0.2 (0.6)	0.5 (0.3)	0.4 (0.2)	0.7 (0.6)
Primary focus: Candidate	-0.4 (0.5)	-0.2 (0.2)	-0.2 (0.2)	0.3 (0.5)
Primary focus: Issues	-0.2 (0.6)	-0.4 (0.2)	-0.4 (0.2)	-0.2 (0.7)
Production value: High	0.8 (0.5)	0.1 (0.2)	0.2 (0.2)	-0.7 (0.5)
Neg. name-calling	-0.3 (0.5)	-0.1 (0.2)	-0.1 (0.2)	0.3 (0.5)
Neg. testimonial	0.7 (0.4)	-0.2 (0.2)	-0.0 (0.2)	-0.9 (0.5)
Neg. transfer of association	0.1 (0.5)	0.2 (0.2)	0.2 (0.2)	0.0 (0.5)
Plain folks	<b>1.0 (0.5)</b>	0.3 (0.2)	<b>0.4 (0.2)</b>	-0.7 (0.6)
Pos. name-calling	-0.5 (0.7)	0.0 (0.2)	-0.0 (0.2)	0.6 (0.8)
Pos. testimonial	0.5 (0.5)	0.1 (0.2)	0.2 (0.2)	-0.3 (0.6)
Pos. transfer of association	0.8 (0.5)	0.0 (0.2)	0.1 (0.2)	-0.8 (0.5)
Intercept	1.0 (0.8)	<b>0.6 (0.3)</b>		
Race: Other	-1.0 (0.6)			
Race: GA Runoff	<b>-1.1 (0.5)</b>			
Race: StateLeg	<b>-1.7 (0.6)</b>			
$\hat{R}^2$ (all vs. control)	0.13	< 0		$p = 0.259$
$\hat{R}^2$ (all predictors)	0.30	< 0		
$\hat{\sigma}$	0.39	0.35		
$N_{treatments}$	181	292		

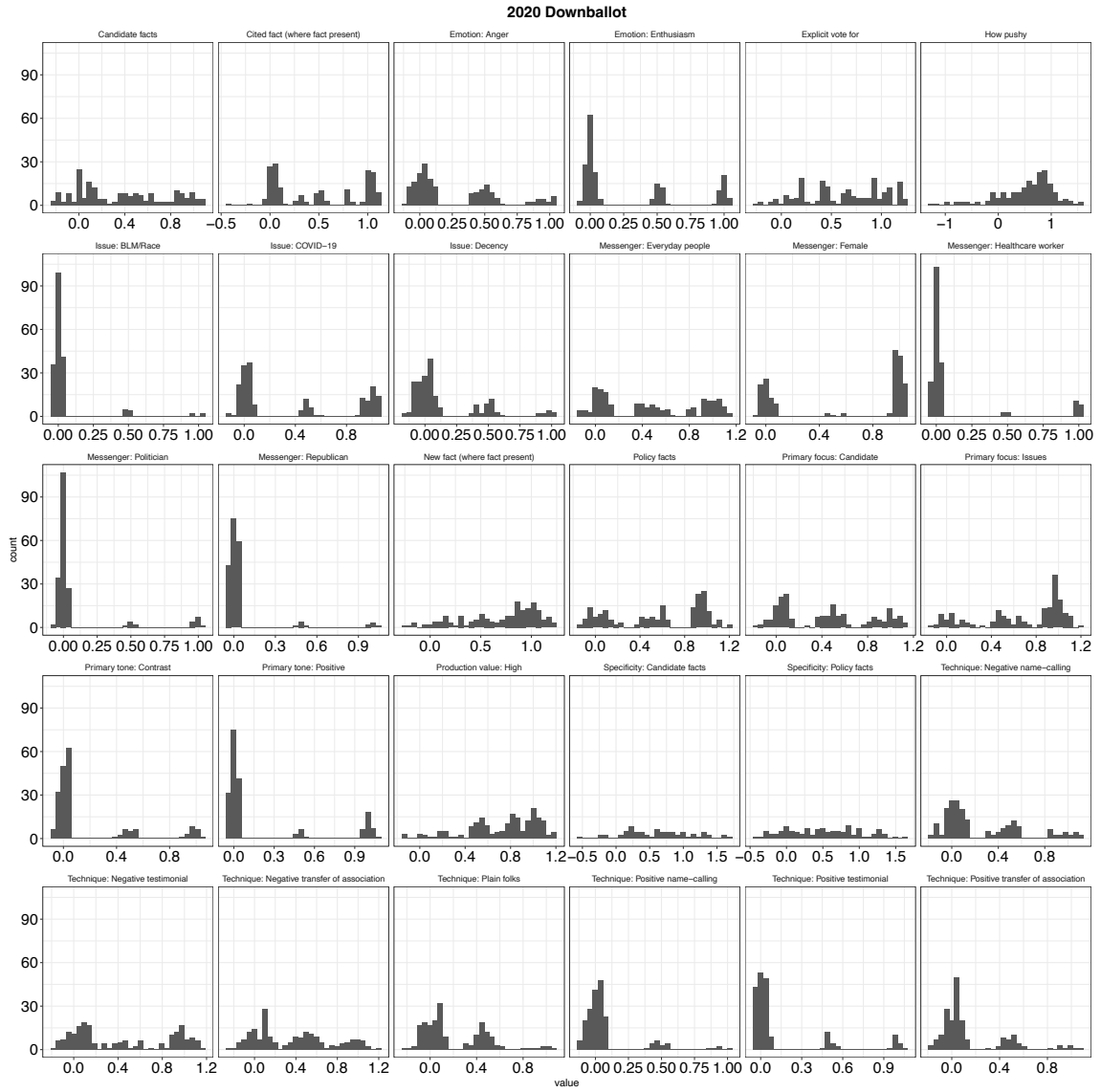
DA20

## DA 2.1 Feature descriptives

Figure DA1: Histograms of coded ad features for 2018.

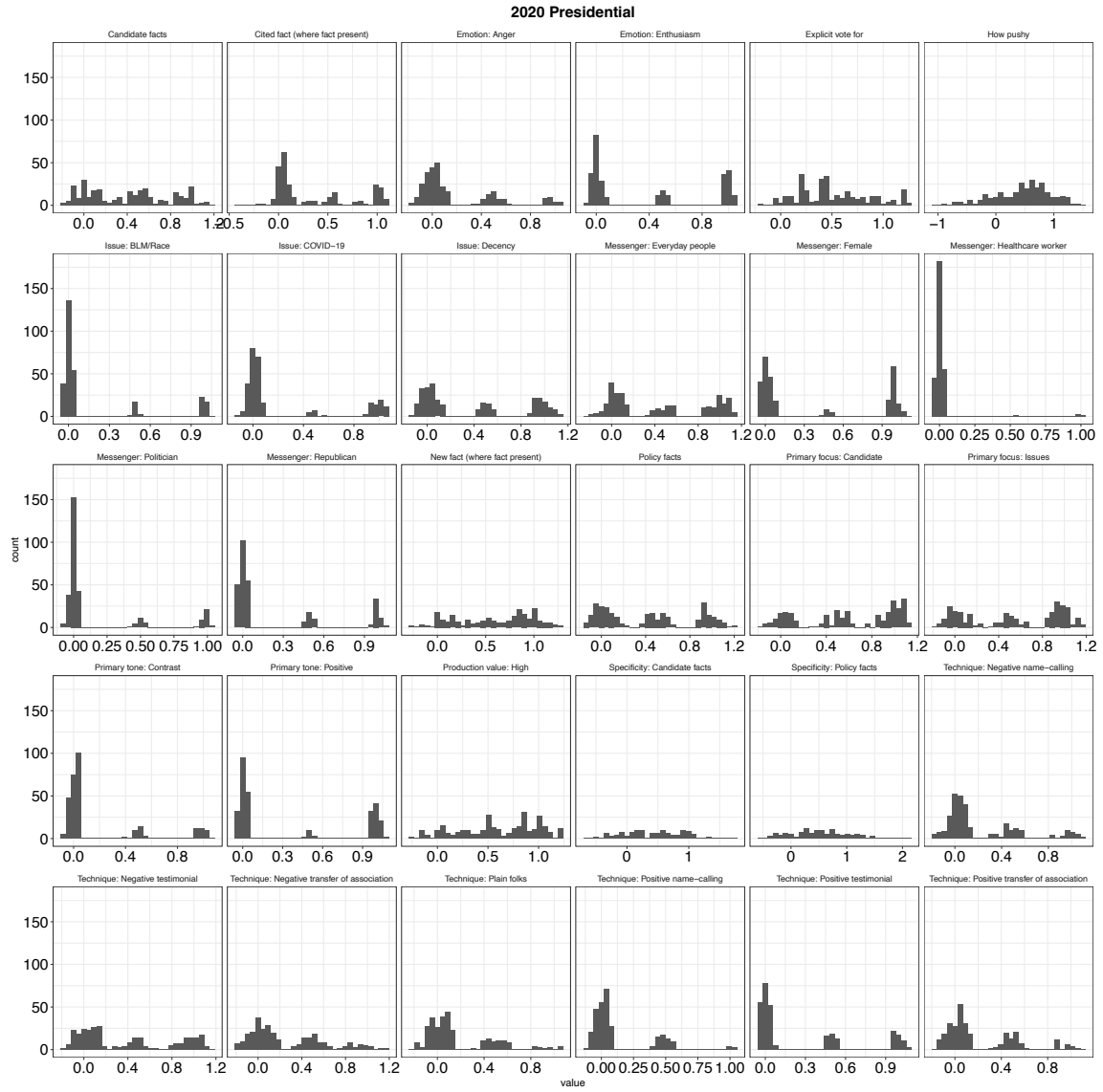


**Figure DA2: Histograms of coded ad features for 2020 downballot.**

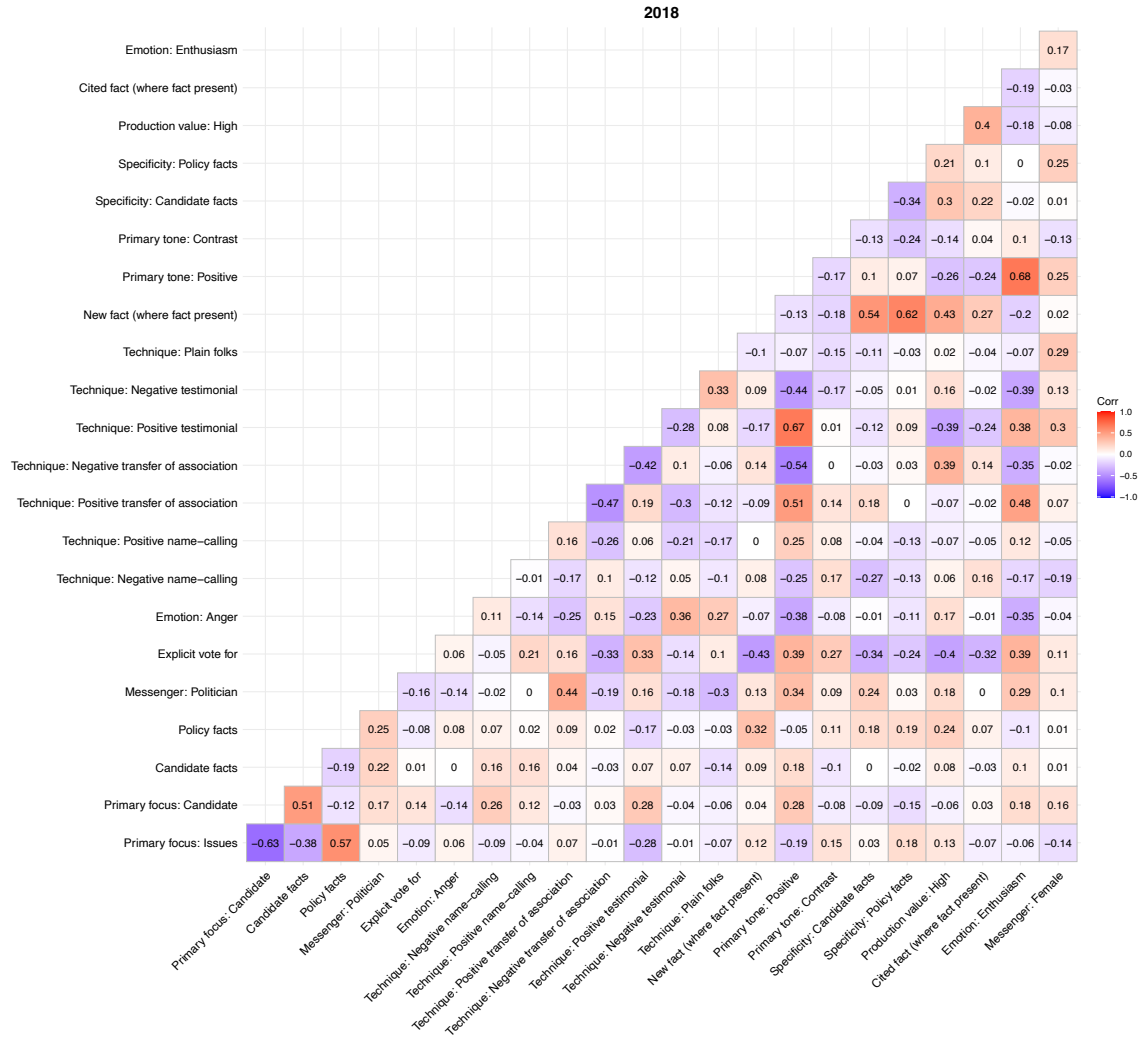




**Figure DA3: Histograms of coded ad features for 2020 presidential.**



**Figure DA4: Correlations between coded ad features for 2018.**

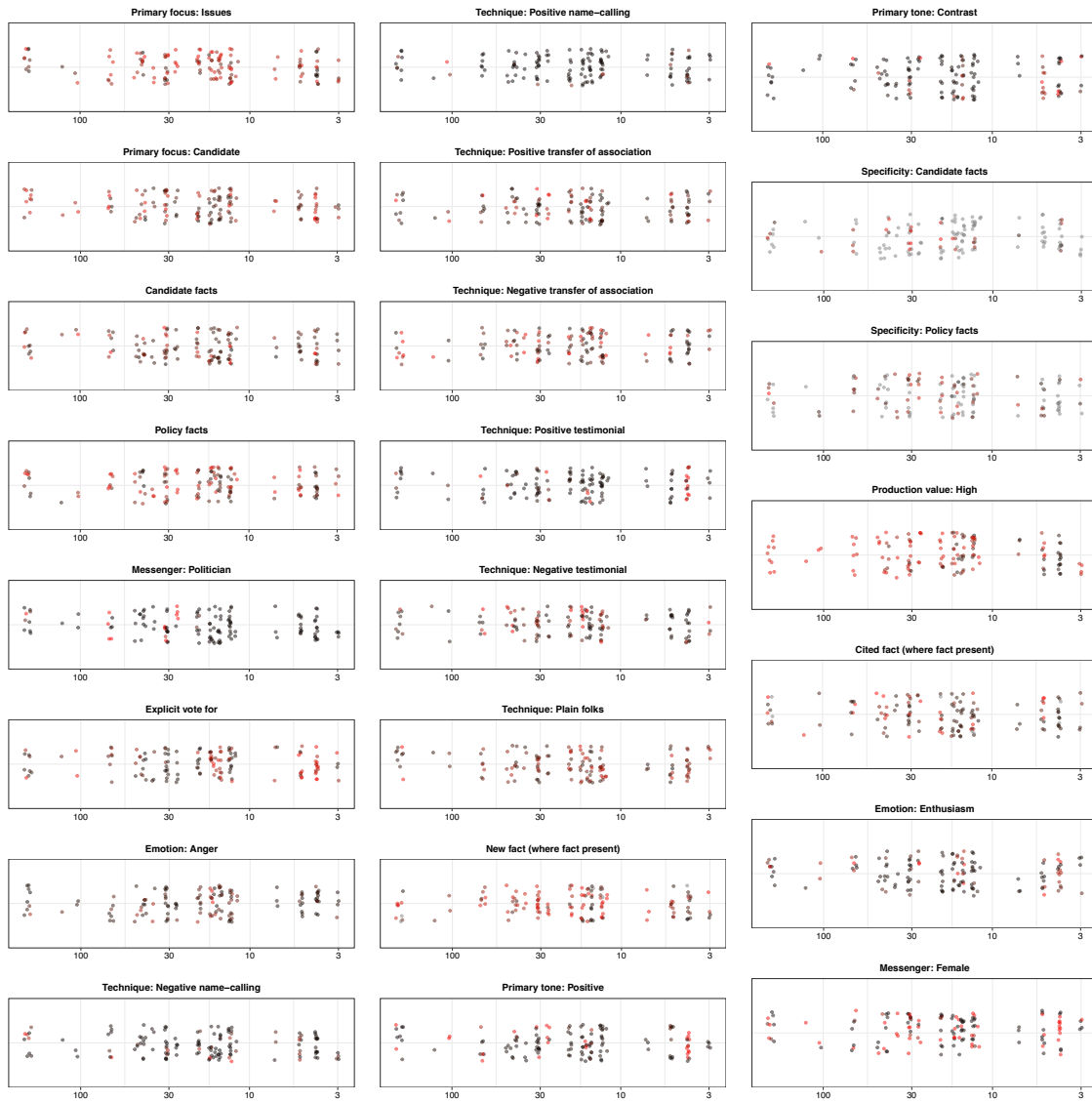


**Figure DA5:** Correlations between coded ad features for 2020 downballot.



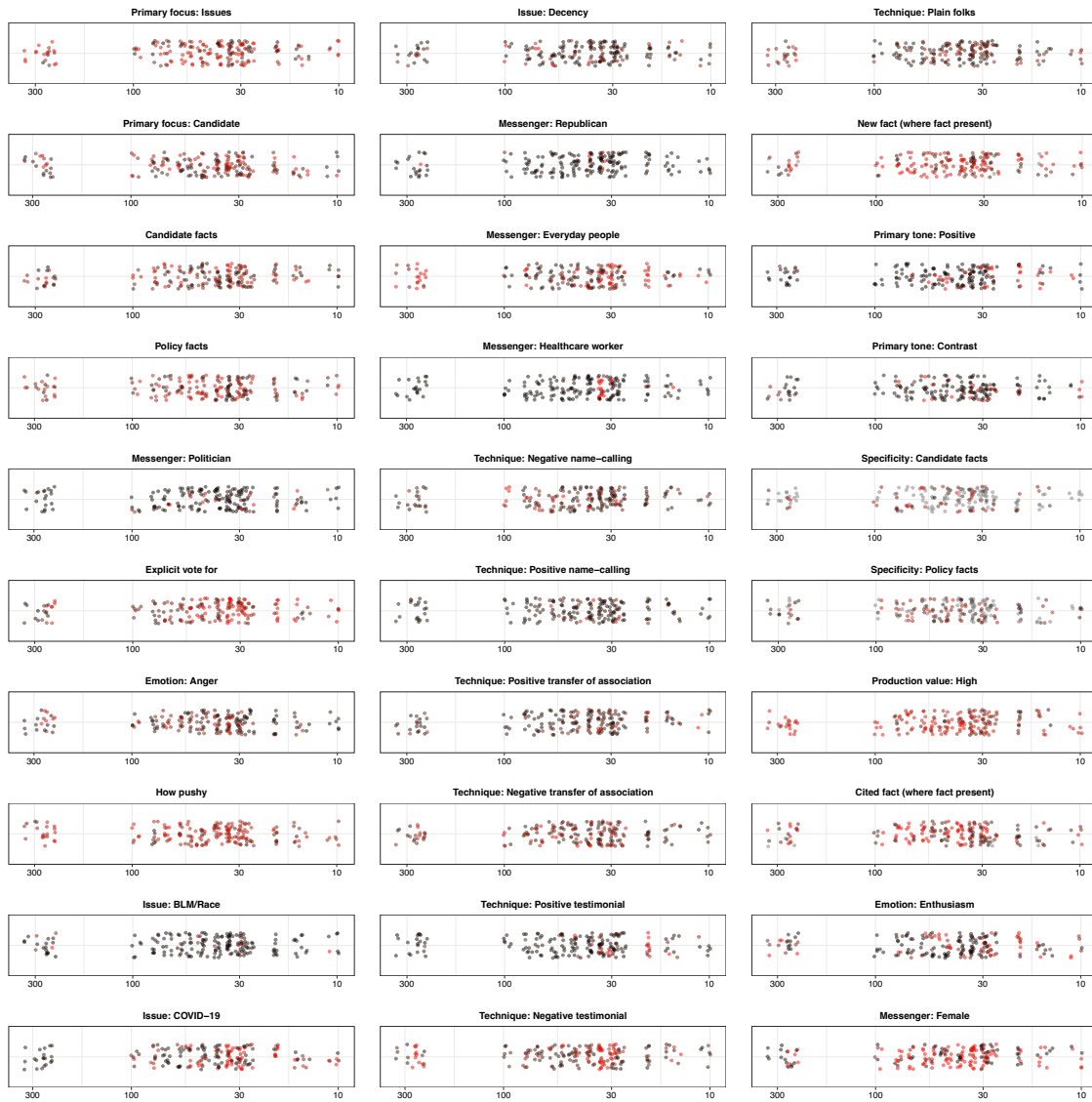


**Figure DA7: Ad features over time for 2018.**



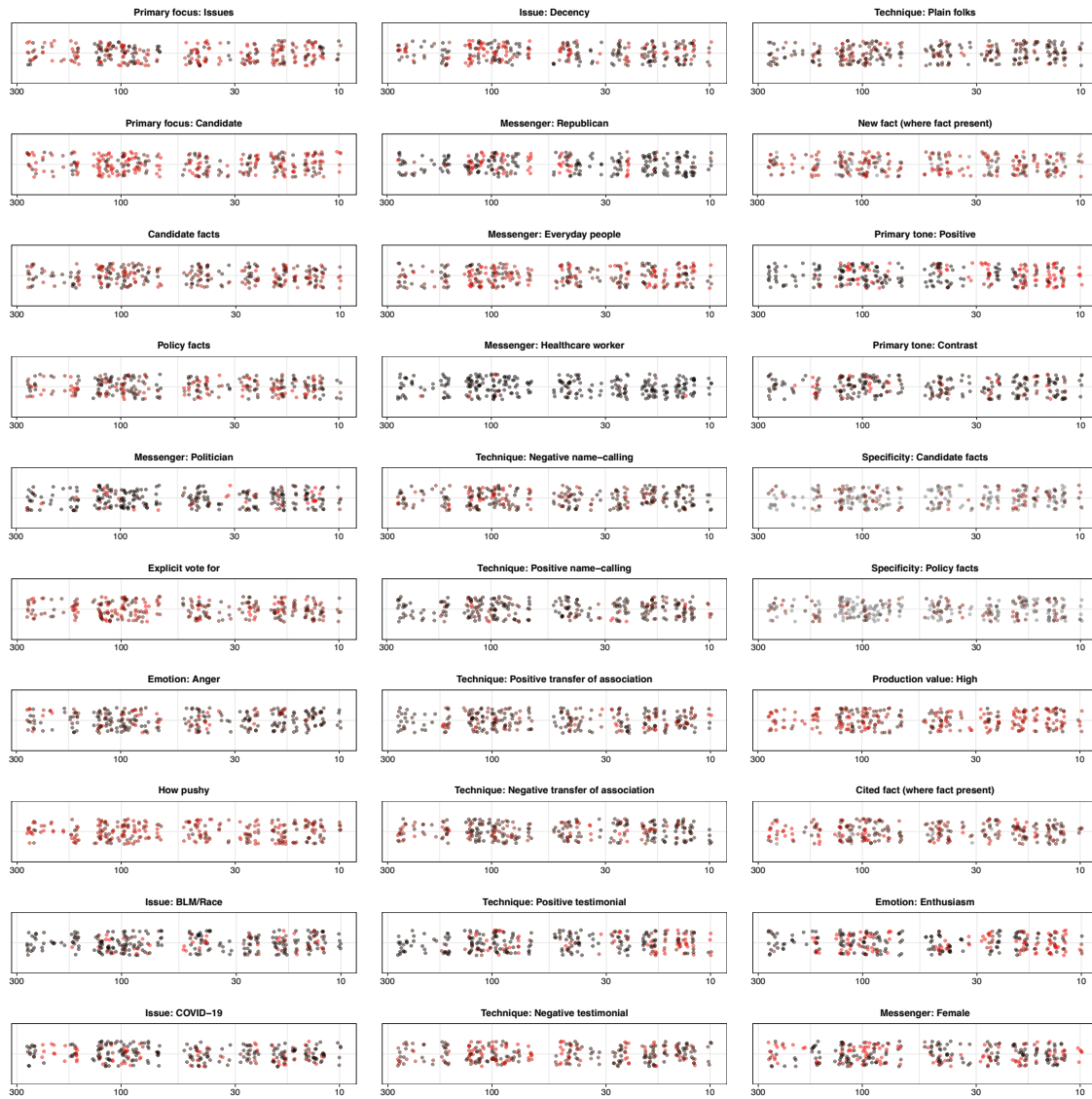
*Notes: The x axis shows days to election on the log scale. Red points indicate the presence of the ad feature labelled in the facet title (black dots indicate its absence). The colors are gradients, to reflect the non-binary values of the feature variables.*

**Figure DA8:** Ad features over time for 2020 downballot.



*Notes: The x axis shows days to election on the log scale. Red points indicate the presence of the ad feature labelled in the facet title (black dots indicate its absence). The colors are gradients, to reflect the non-binary values of the feature variables.*

**Figure DA9:** Ad features over time for 2020 presidential.



*Notes: The x axis shows days to election on the log scale. Red points indicate the presence of the ad feature labelled in the facet title (black dots indicate its absence). The colors are gradients, to reflect the non-binary values of the feature variables.*

### DA 3 External validity within an election cycle

Our analysis of the returns to survey experimentation assumes that ad testing is generalizable across time *within the same election cycle*—in other words, ads that perform better at time 1 also perform better at time 2 within the same election cycle. If this were not the case, then identifying better ads via survey experimentation would not increase that campaign’s impact.

As we highlight in the main text, this is an important question for future research to address. However, in this section we provide some initial evidence consistent with this assumption. In particular, one way to test this assumption is to perform a test-retest on the same set of ads; that is, estimate their effects at time 1 and then again at time 2 and examine whether the treatment effects are correlated across time. If they are positively correlated, then the best performing ad at time 1 should tend to perform better than the average ad when all ads are tested again at time 2.

Since we lack a test-retest design in the current data, we turn to data from other research. In particular, we re-analyze the data from three recent papers (Hewitt and Tappin 2022; Tappin et al. 2022; Wittenberg et al. 2021). Two of these papers (Hewitt and Tappin 2022; Wittenberg et al. 2021) report a total of three survey experiments conducted in 2021 which included dozens of persuasive video treatments about contemporary U.S. policy issues. The third paper (Tappin et al. 2022) conducted a partial replication of these three experiments in 2022, providing for a test-retest design. The minimum duration between the original survey experiments and the replication was 6 months; plausibly much longer than the time between a campaign’s initial ad test and their dissemination of the ad in the field. This makes our test-retest analysis particularly stringent.

Hewitt and Tappin (2022) conducted two survey experiments in which U.S. adults were randomly exposed to a persuasive video treatment or a placebo. The first experiment was focused on attitudes towards the U.S. Citizenship Act of 2021, a bill presenting a series of immigration reforms; the second experiment was focused on attitudes towards a universal basic income. Not all the persuasive video treatments were retested in the replication experiment conducted by Tappin et al. (2022). A total of 26 treatment videos arguing in favor of the U.S. Citizenship Act were retested, as were 10 treatment videos arguing against a universal basic income. In both the original and replication experiments, post-treatment attitudes were measured in the same way: a seven-point Likert scale running from 1 (strong opposition to the policy) to 7 (strong support).

Wittenberg et al. (2021) also conducted two survey experiments, however only the first of these was retested in the replication experiment conducted by Tappin et al. (2022). All 48 treatment videos from the first experiment were retested in the replication. The 48 videos argued in favor of the progressive position on a variety of different U.S. policy



topics (e.g., climate change, gun control, income redistribution), and thus different videos could have different outcome variables (there were 36 different outcome variables in total). In the original experiment, U.S. adults were randomly assigned to give their attitudes about 3 different topics, and, for each topic, were randomly assigned to receive either a relevant video treatment or nothing (control) before giving their attitudes. In both the original and replication experiments, post-treatment attitudes were measured in the same way: a five-point Likert scale running from 1 (strong opposition to the main persuasive claim made in the video) to 5 (strong support).

In the replication experiment conducted by [Tappin et al. \(2022\)](#), U.S. adults completed three survey “modules.” Each module was a self-contained experiment, where the relevant treatments and outcomes corresponded to those from each of the original experiments described above (i.e., module 1 = U.S. Citizenship Act; module 2 = universal basic income (UBI); module 3 = various policy issues). The order in which modules were completed was randomized. In the U.S. Citizenship Act and UBI modules, respondents were randomly assigned to one of four conditions, named: control, naive, single-best, and targeting. The control and targeting conditions are not relevant here and will not be discussed further. In the naive condition, respondents were randomly assigned to one of 26 (U.S. Citizenship Act) or 10 (UBI) treatment videos. In the single-best condition, all respondents were shown the same treatment video: that which performed best (had the largest treatment effect) in the original survey experiment. Outcomes were then measured.

In the module that contained various policy issues, respondents were first randomly assigned to either a treatment or control group, determining whether they would see a video or no video. They were then further randomized to one of three conditions, named: naive, single-best, and targeting (as above we do not use/discuss the targeting condition here). In the naive condition, respondents were first randomized to one of the 48 videos. Subsequently, respondents who were in the treatment group actually saw their assigned video and answered the outcome variable, whereas those in the control group saw no video but answered the outcome variable corresponding to the video they would have seen had they been in the treatment group. In the single-best condition, respondents in the treatment group all saw the same video: that which performed best (had the largest treatment effect) in the original survey experiment; while those in the control group saw no video but simply answered the outcome variable corresponding to the best performing video.

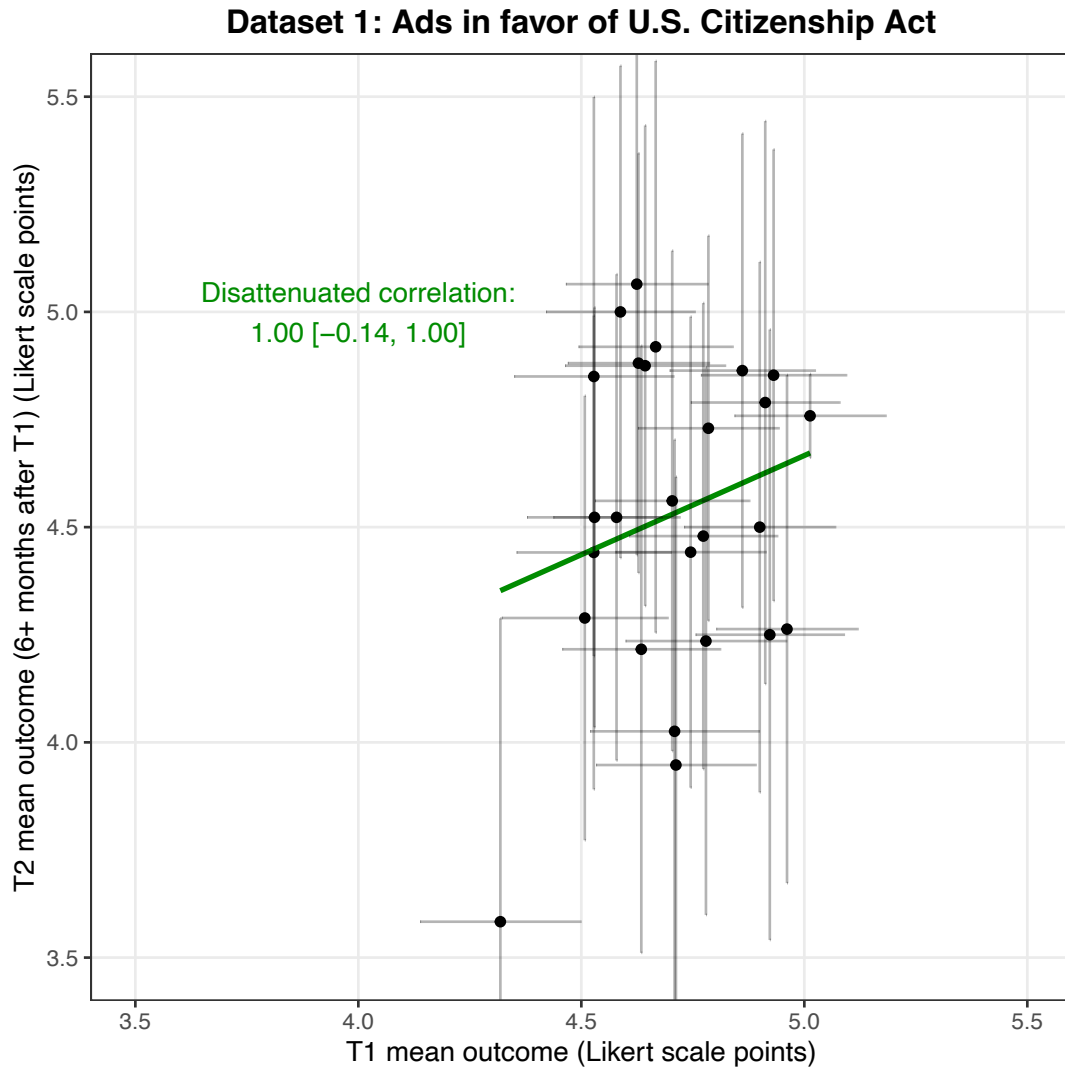
We first produce scatter plots of the treatment effects estimated in each of the original experiments (for brevity labelled T1) and those estimated in the replication experiment (T2). For simplicity, for the U.S. Citizenship Act and UBI experiments, we simply estimate the mean value of the outcome variable for each treatment video. However, for the experiment with various policy issues, we must estimate treatment effects given that the outcome variable is not the same for all treatment videos and thus a direct comparison

between means is incoherent.

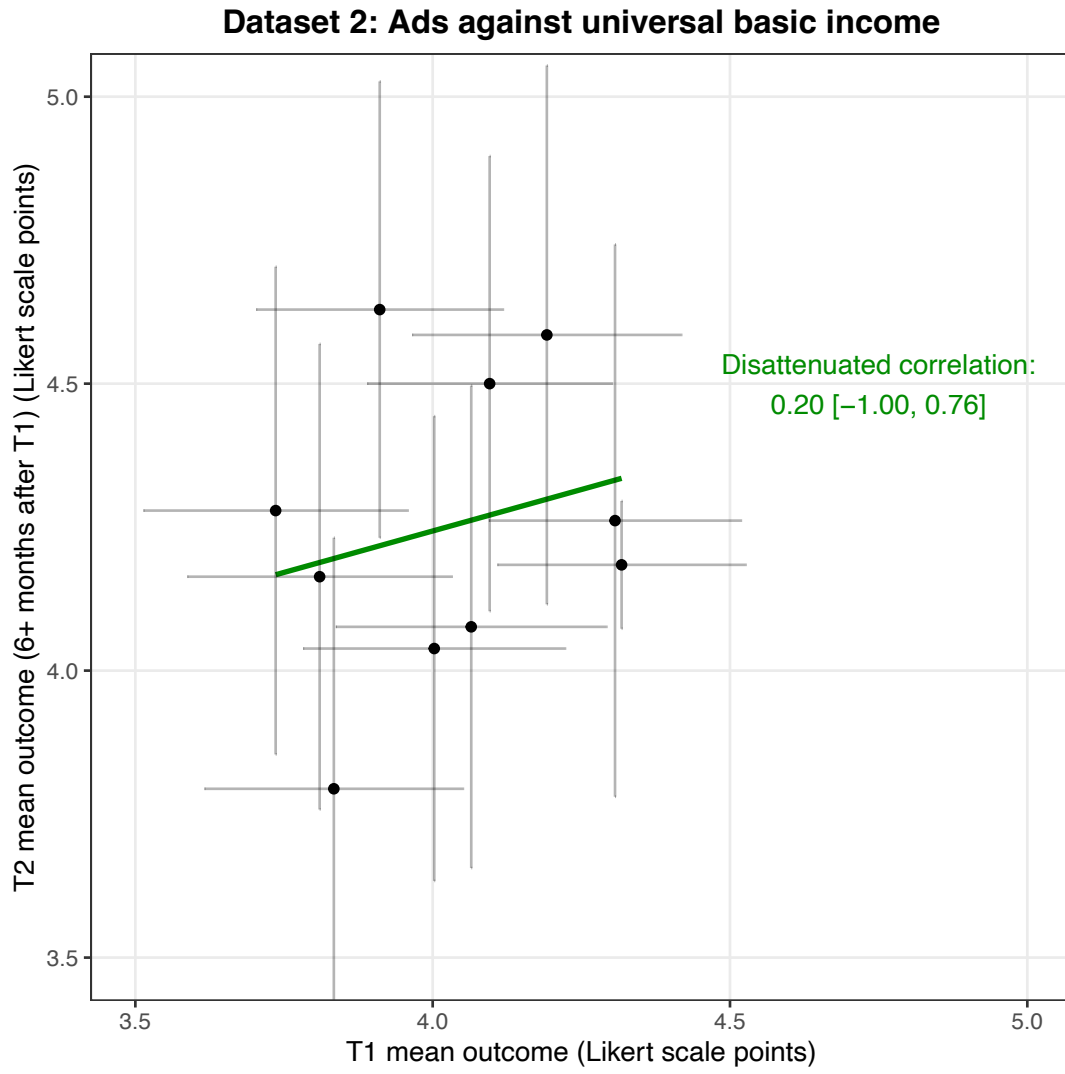
Figure [DA10](#) shows the scatter plot for the U.S. Citizenship Act ads; Figure [DA11](#) for the UBI ads; and Figure [DA12](#) for the ads that advocate the progressive line on various issues.

We also compute the correlation between the true treatment effects at T1 and T2. Because the treatment effects are estimated with error at both time points, the sampling error in the treatment effect estimates will attenuate the correlation between the two sets of estimates towards zero. We correct for this attenuation using a random effects model and report estimates of the correlation between the true, unobserved treatment effects. The model assumes that the *true* treatment effects are distributed according to a bivariate normal distribution with some mean and covariance (one dimension per time point). Given our *estimated* treatment effects and their sampling variances, the model estimates the mean and covariance of this bivariate normal distribution, thereby providing an estimate of the correlation between the true, unobserved treatment effects. We implement the model in the R package `metafor` ([Viechtbauer 2010](#)). In all three instances we estimate a positive correlation that cannot be distinguished from a strong or perfect positive correlation, although all three correlations are also estimated with considerable sampling error.

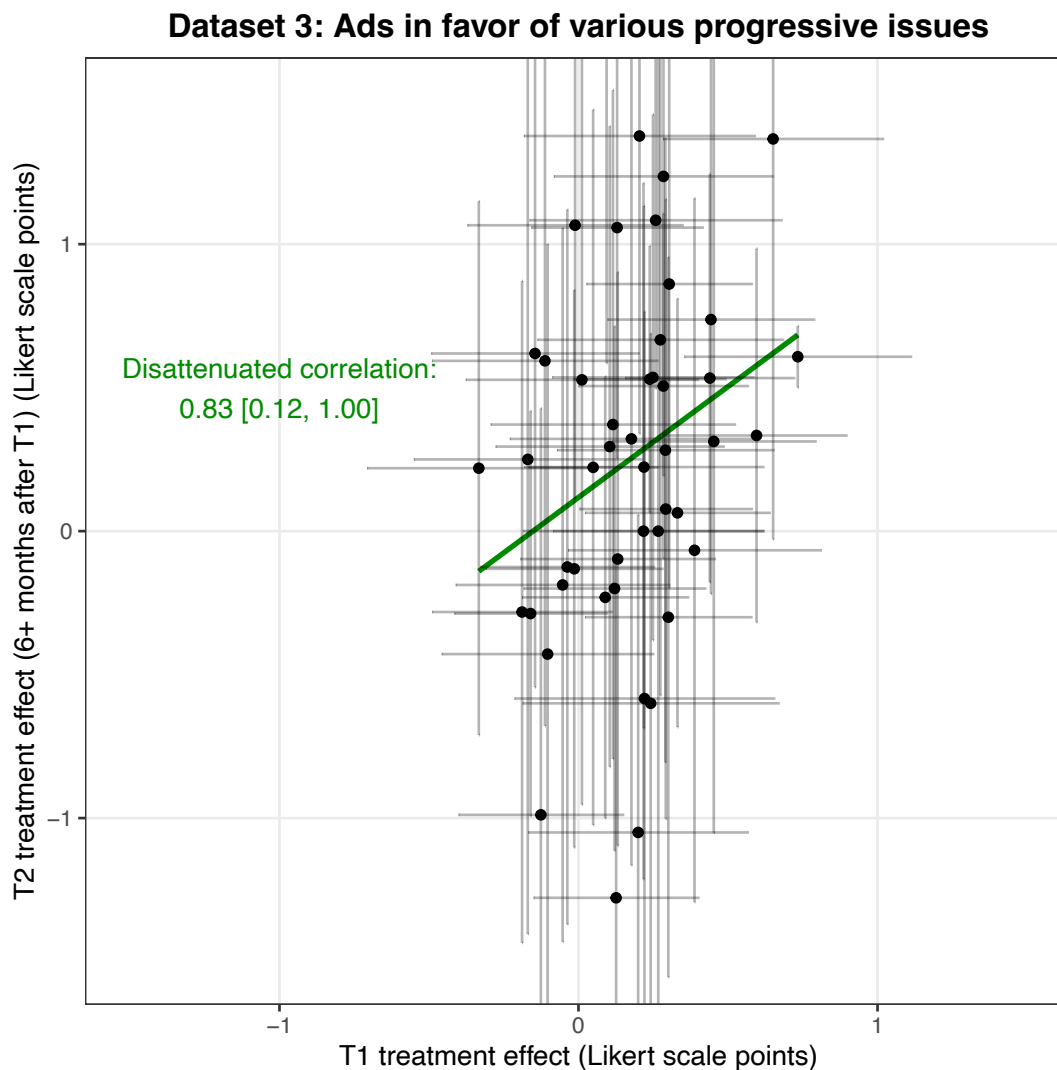
**Figure DA10:** Dataset 1: Ads in favor of US Citizenship Act



**Figure DA11:** Dataset 2: Ads against universal basic income



**Figure DA12:** Dataset 3: Ads in favor of various progressive issues

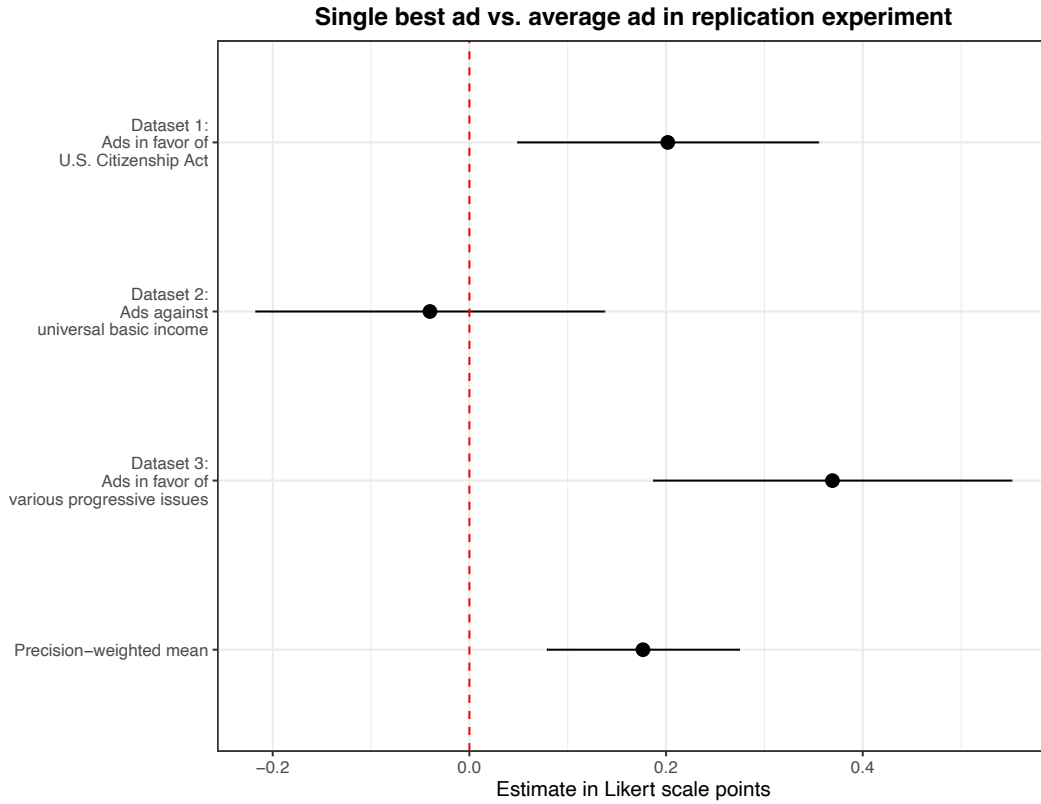


We conduct a second test to help underscore the implications of these findings for experimentation in campaigns. In particular, the positive correlation in ad effects we observe across time in these experiments implies that the best performing ad at T1 (original experiment) should perform better than the average ad when all the ads are tested again at T2 (replication experiment). To test this implication, we compare attitudes in the single-best condition vs. naive condition of the replication experiment. Recall that respondents in the single-best condition saw the video that performed best at T1, while those in the naive condition saw a video sampled randomly from the full set of videos. Figure [DA13](#) shows the difference in means (single-best – naive) for each of the three modules, as well as the precision-weighted mean across modules (note: for the module with various progressive issue ads, the estimate is a difference-in-difference estimate which tests whether the treatment effect of video vs. control is larger in the single-best vs. naive condition).

As Figure DA13 shows, in two of three cases and on average, the best performing ad at T1 outperforms the average ad when all the ads are retested at T2.

In sum, while the analyses in this section focus on issue (not candidate) ads, they provide some evidence that ad testing is generalizable within the time frame of a single election cycle.

**Figure DA13:** Single best ad vs. average ad in replication experiment

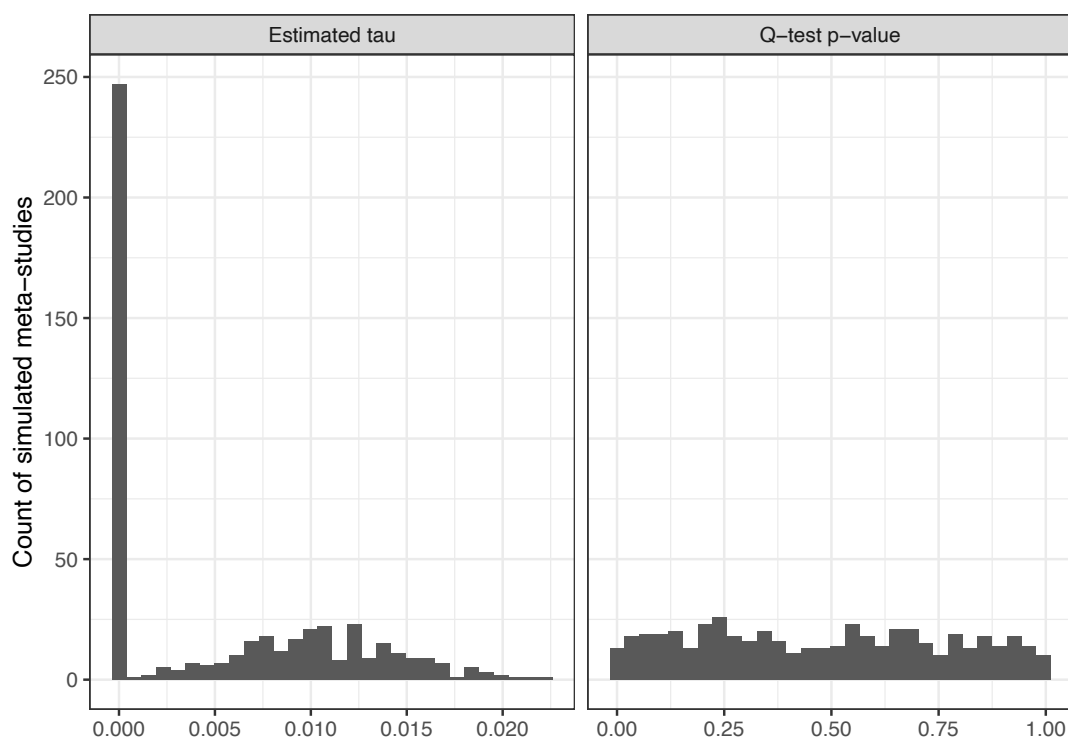


## DA 4 Appendix: Meta-regression under the null of effect homogeneity

In this appendix, we explore the properties of our meta-analytic design under the null of effect heterogeneity. We ask, what would our study have produced if applied to 100 identical experiments whose results only differ due to sampling variability? To do so, we set up a simulation in `DeclareDesign` (Blair, Coppock, and Humphreys 2023) to run a 1,000 unit, two arm trial with a binary outcome 100 times. We then meta-analyze the resulting 100 experiment estimates and report the  $p$ -value from the Q-test for heterogeneity and the estimate of  $\tau$ , the standard deviation of effects. We repeat this process 500 times. Because we are simulating under the null of no effect heterogeneity (the true effect for all 100 experiments is the same), the Q-test should come back significant only 5% of the time and the estimate of  $\tau$  should be zero or close to zero.

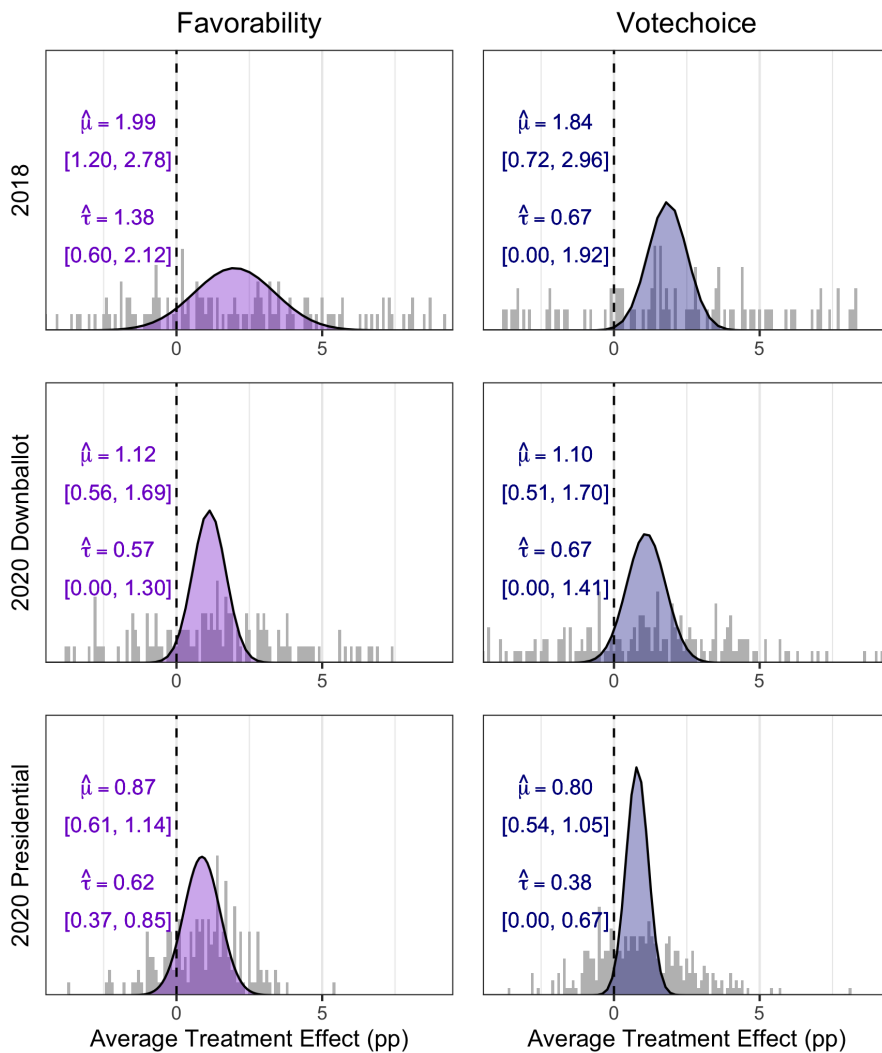
Figure DA14 shows that these expectations are met. In these 500 simulated meta-studies of 100 experiments each, we falsely reject the null of effect homogeneity in only 30 simulations (6%). Tau is estimated to be exactly zero in 247 simulations (49%) and is otherwise estimated to be lower than 0.02.

**Figure DA14:** Results of 500 simulated meta-studies of 100 identical experiments



# DA 5 Appendix: Analyses by subgroup

**Figure DA15:** Estimated distribution of ATEs for men

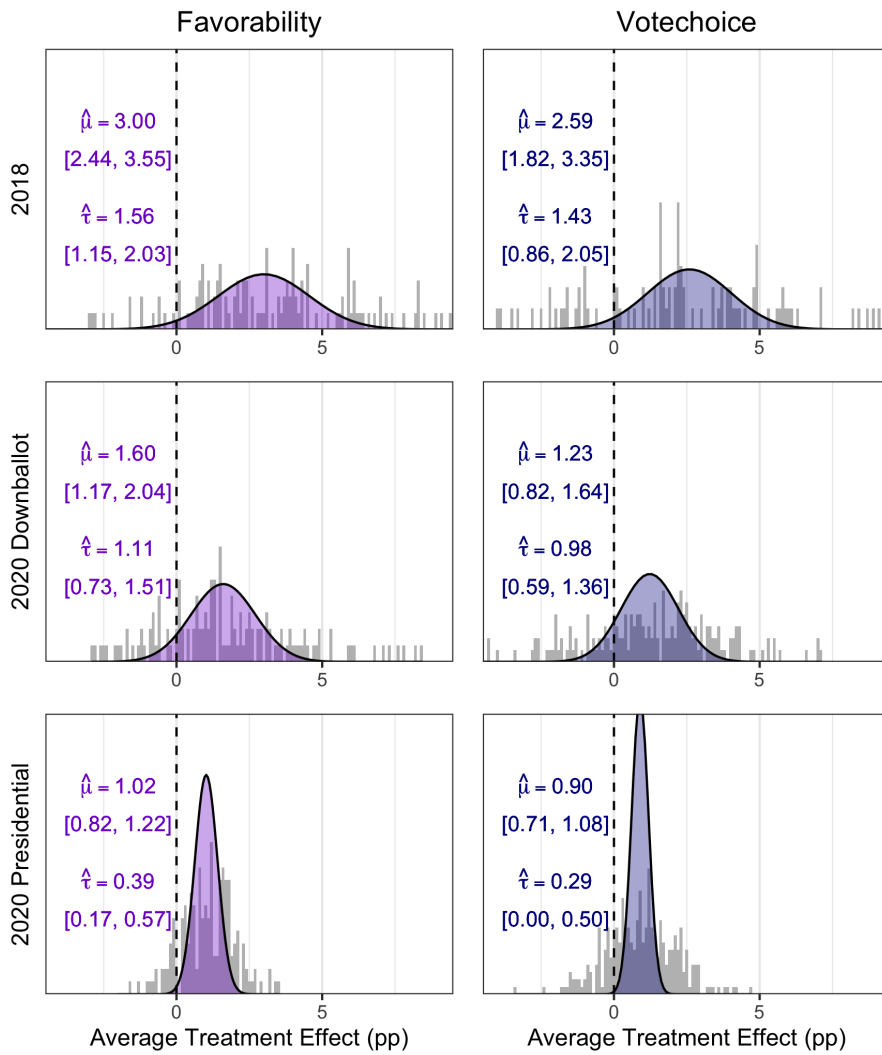




**Figure DA16:** *t*-statistics for all pre-registered meta-regressions, for men

	Favorability			Vote choice				
	2018	2020 Downballot	2020 Presidential	2018	2020 Downballot	2020 Presidential		
2018 Primary hypotheses	Candidate facts	2.82**	0.89	-0.90	0.72	1.37	-0.84	
	New fact (where fact present)	-0.31	1.63	0.61	0.18	1.01	0.04	
	Policy facts	0.06	-0.86	-1.23	-0.01	0.02	0.99	
	Primary focus: Candidate	1.02	1.17	-0.70	0.14	-0.61	-1.09	
	Primary focus: Issues	2.41*	0.12	1.20	1.64	-0.27	-0.67	
	Technique: Negative name-calling	0.61	0.31	-0.44	1.33	-0.23	-0.26	
	Technique: Negative testimonial	0.74	0.68	0.42	0.32	1.06	-0.93	
	Technique: Negative transfer of association	0.14	1.15	0.56	0.12	0.39	0.73	
	Technique: Plain folks	0.85	0.17	1.22	1.85	1.74	0.91	
	Technique: Positive name-calling	1.52	-2.10*	-0.20	1.05	-1.61	-0.22	
	Technique: Positive testimonial	0.23	0.92	1.51	-0.77	-0.16	0.11	
	Technique: Positive transfer of association	0.20	-1.42	0.64	0.81	0.39	0.20	
	2018 Secondary hypotheses	Cited fact (where fact present)	-2.68**	1.37	-0.09	-0.46	-0.62	0.77
Emotion: Anger		0.80	1.46	-0.06	2.32*	1.38	1.35	
Emotion: Enthusiasm		1.16	-1.92	-0.54	0.82	-1.95	0.10	
Explicit vote for		2.28*	-1.88	1.45	2.24*	-1.59	2.06*	
Messenger: Female		0.15	0.57	2.32*	0.31	-0.16	1.35	
Messenger: Politician		1.45	-0.37	-1.64	-1.05	0.89	0.14	
Primary tone: Contrast		0.94	-0.30	1.38	1.25	-1.65	2.74**	
Primary tone: Positive		-0.14	-3.30**	-0.29	-0.39	-1.80	0.60	
Production value: High		0.92	-0.28	0.43	0.81	-1.00	1.51	
Specificity: Candidate facts		-0.03	2.62*	-1.47	1.60	-0.59	-0.66	
Specificity: Policy facts		0.49	1.42	0.15	-0.06	0.68	0.53	
2020 New hypotheses		How pushy		2.92**	1.37		0.49	2.42*
		Issue: BLM/Race		-0.57	-1.53		0.18	-1.29
	Issue: COVID-19		-1.22	0.83		0.43	-0.30	
	Issue: Decency		2.63**	-1.32		-0.32	-0.19	
	Messenger: Everyday people		-0.37	1.40		-0.09	-0.63	
	Messenger: Healthcare worker		-0.18	0.32		-0.12	-0.30	
	Messenger: Republican		1.21	-0.73		2.34*	-0.36	

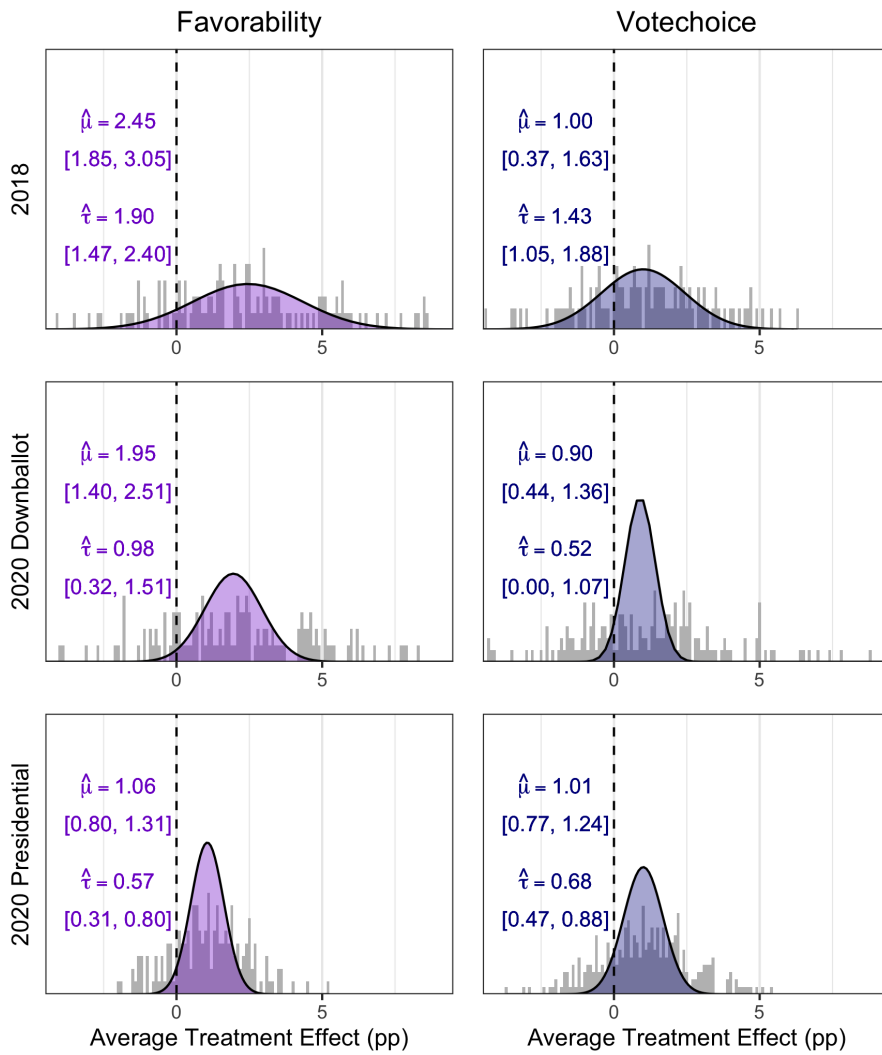
**Figure DA17:** Estimated distribution of ATEs for women



**Figure DA18:** *t*-statistics for all pre-registered meta-regressions, for women

	Favorability			Vote choice			
	2018	2020 Downballot	2020 Presidential	2018	2020 Downballot	2020 Presidential	
2018 Primary hypotheses	Candidate facts	2.02*	2.38*	0.06	1.25	1.88	-0.46
	New fact (where fact present)	-2.68**	1.46	0.08	-1.98	0.17	-0.37
	Policy facts	-0.86	0.37	2.99**	0.09	-0.90	2.59*
	Primary focus: Candidate	2.73**	0.31	-0.25	1.01	0.75	-0.78
	Primary focus: Issues	3.15**	-1.93	2.74**	2.52*	-0.91	-0.29
	Technique: Negative name-calling	0.64	0.85	0.30	0.70	-0.07	1.02
	Technique: Negative testimonial	2.12*	1.24	-0.86	1.62	1.09	0.38
	Technique: Negative transfer of association	0.53	0.50	-0.60	0.30	-0.02	0.13
	Technique: Plain folks	-0.83	-0.05	0.19	0.65	1.02	0.91
	Technique: Positive name-calling	-0.26	-0.08	-1.30	-1.61	0.12	0.69
	Technique: Positive testimonial	0.90	-1.36	0.41	-1.05	-0.07	1.46
	Technique: Positive transfer of association	-0.09	-0.16	-0.68	0.95	2.17*	-0.02
	2018 Secondary hypotheses	Cited fact (where fact present)	-1.75	0.95	-0.16	-0.88	0.45
Emotion: Anger		1.28	1.53	-1.17	2.66**	0.14	-0.10
Emotion: Enthusiasm		0.67	-1.02	0.02	-0.88	1.44	1.05
Explicit vote for		1.69	-2.16*	0.75	2.56*	1.76	0.66
Messenger: Female		0.27	0.48	1.46	1.71	-1.12	1.84
Messenger: Politician		2.02*	1.73	-0.85	0.18	1.09	-0.58
Primary tone: Contrast		0.07	-0.65	-0.36	0.16	0.08	2.96**
Primary tone: Positive		0.10	-1.35	0.21	-1.79	1.91	2.05*
Production value: High		0.79	3.41**	-0.52	0.26	3.23**	-1.11
Specificity: Candidate facts		-0.28	2.76**	-0.40	0.92	1.63	-1.99*
Specificity: Policy facts		-0.18	0.88	3.68**	0.07	-0.93	1.37
2020 New hypotheses	How pushy		1.58	2.17*		0.51	1.22
	Issue: BLM/Race		0.31	-1.00		0.17	0.65
	Issue: COVID-19		-1.82	1.01		-0.47	-0.37
	Issue: Decency		2.74**	-1.78		1.96	1.06
	Messenger: Everyday people		1.25	0.89		-0.44	1.69
	Messenger: Healthcare worker		-1.80	-0.13		-0.07	2.02*
	Messenger: Republican		1.44	-0.09		1.18	1.18

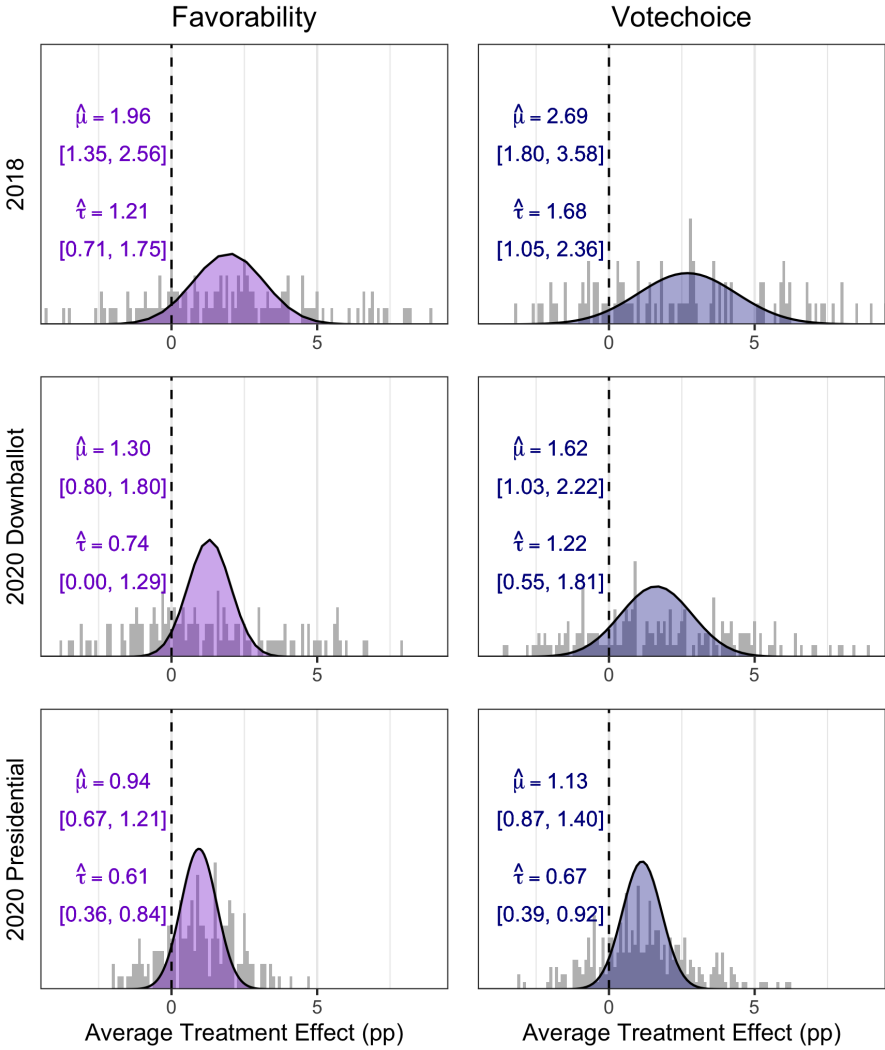
**Figure DA19:** Estimated distribution of ATEs for Democratic respondents



**Figure DA20:** *t*-statistics for all pre-registered meta-regressions, for Democratic respondents

	Favorability			Vote choice				
	2018	2020 Downballot	2020 Presidential	2018	2020 Downballot	2020 Presidential		
2018 Primary hypotheses	Candidate facts	1.90	2.16*	-1.86	0.31	1.07	-2.40*	
	New fact (where fact present)	-2.38*	0.32	-0.29	-1.17	-0.21	-1.22	
	Policy facts	-0.38	0.01	1.34	0.23	0.16	0.91	
	Primary focus: Candidate	2.23*	-0.09	-0.01	-0.07	1.69	-1.14	
	Primary focus: Issues	2.96**	-1.97	1.84	0.51	-0.82	-0.89	
	Technique: Negative name-calling	-0.23	-0.49	-0.47	-0.20	-0.24	-1.11	
	Technique: Negative testimonial	2.12*	1.55	1.35	1.48	3.18**	1.28	
	Technique: Negative transfer of association	0.21	1.35	0.26	-0.02	0.30	1.34	
	Technique: Plain folks	-0.95	-1.13	-0.38	1.74	-0.13	0.21	
	Technique: Positive name-calling	0.73	-0.72	2.11*	-0.06	1.11	1.88	
	Technique: Positive testimonial	0.47	0.25	-0.16	-0.72	0.19	0.23	
	Technique: Positive transfer of association	-0.71	-0.87	1.07	0.54	2.96**	1.63	
	2018 Secondary hypotheses	Cited fact (where fact present)	-3.01**	1.26	-0.49	-1.88	0.53	-1.00
Emotion: Anger		2.11*	0.82	-0.22	2.66**	0.18	0.44	
Emotion: Enthusiasm		0.68	-0.16	1.34	0.47	1.11	2.39*	
Explicit vote for		2.59*	-0.86	1.50	4.13**	2.11*	0.96	
Messenger: Female		-0.53	-0.13	1.07	1.73	-0.75	1.82	
Messenger: Politician		2.36*	0.71	-0.51	0.09	0.35	-0.36	
Primary tone: Contrast		0.72	-0.41	1.82	1.02	1.48	3.93**	
Primary tone: Positive		-0.08	-1.46	0.56	-0.36	0.83	1.73	
Production value: High		0.54	-0.16	0.54	-0.37	0.09	-0.49	
Specificity: Candidate facts		-1.07	2.43*	-1.04	0.34	1.15	-1.92	
Specificity: Policy facts		-1.85	-0.07	3.43**	-2.32*	-1.20	1.75	
2020 New hypotheses		How pushy		1.76	1.08		0.45	0.69
		Issue: BLM/Race		-0.46	-0.87		-0.26	0.49
	Issue: COVID-19		0.11	1.39		-0.24	-0.62	
	Issue: Decency		1.75	-1.56		0.74	-0.15	
	Messenger: Everyday people		1.63	0.53		-1.74	0.99	
	Messenger: Healthcare worker		-1.12	-0.98		1.18	1.38	
Messenger: Republican		1.75	-0.85		2.35*	0.05		

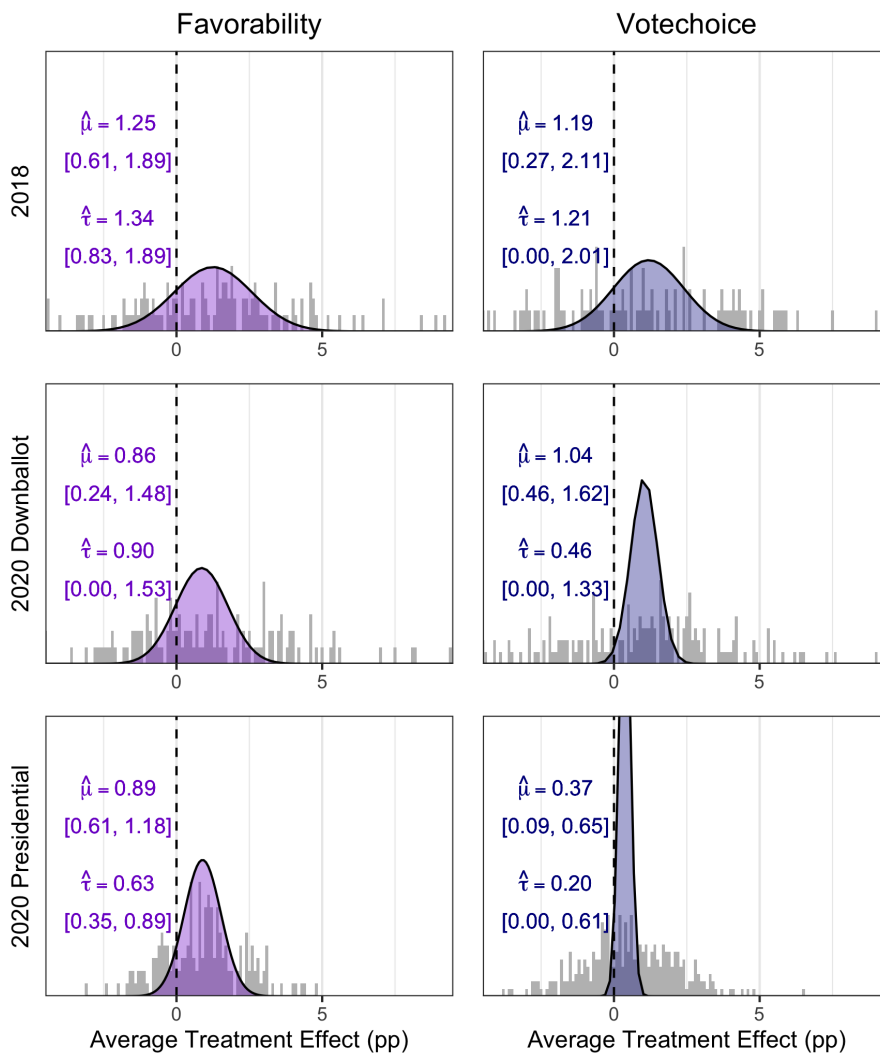
**Figure DA21:** Estimated distribution of ATEs for Independent respondents



**Figure DA22:** *t*-statistics for all pre-registered meta-regressions, for Independent respondents

	Favorability			Vote choice				
	2018	2020 Downballot	2020 Presidential	2018	2020 Downballot	2020 Presidential		
<b>2018 Primary hypotheses</b>	Candidate facts	1.95	1.69	0.21	1.38	1.21	0.68	
	New fact (where fact present)	-0.28	1.51	0.79	-1.40	1.18	-0.97	
	Policy facts	0.78	-0.18	0.33	0.62	-0.47	2.10*	
	Primary focus: Candidate	2.96**	0.18	-1.52	1.82	-1.49	-0.91	
	Primary focus: Issues	3.38**	-0.86	1.42	2.67**	-1.21	-0.66	
	Technique: Negative name-calling	0.47	1.00	0.27	1.37	0.43	1.68	
	Technique: Negative testimonial	1.20	-0.24	-0.70	3.26**	-1.13	-0.88	
	Technique: Negative transfer of association	1.55	1.32	-1.65	1.82	0.41	-1.84	
	Technique: Plain folks	-0.23	0.46	1.71	1.00	2.20*	0.80	
	Technique: Positive name-calling	0.56	-1.12	-1.14	0.04	-2.07*	0.04	
	Technique: Positive testimonial	0.24	-1.23	1.40	-0.59	-0.29	1.48	
	Technique: Positive transfer of association	0.25	0.26	-0.53	1.06	0.62	0.25	
	<b>2018 Secondary hypotheses</b>	Cited fact (where fact present)	-2.29*	1.35	0.16	-2.33*	0.65	-1.04
Emotion: Anger		-0.14	2.35*	-0.75	3.20**	0.59	-0.43	
Emotion: Enthusiasm		0.46	-2.63**	-0.51	-0.80	-0.91	1.10	
Explicit vote for		2.87**	-2.59*	1.70	3.78**	-0.17	1.88	
Messenger: Female		0.61	1.53	2.13*	1.17	-0.20	1.01	
Messenger: Politician		0.22	0.56	-1.24	-0.31	1.59	-0.04	
Primary tone: Contrast		0.57	-0.26	1.09	0.22	-1.76	3.11**	
Primary tone: Positive		0.01	-3.06**	0.57	-1.60	-0.05	3.03**	
Production value: High		1.33	2.53*	-1.77	1.16	1.97	-0.30	
Specificity: Candidate facts		0.10	2.59*	-1.20	0.80	0.91	-0.43	
Specificity: Policy facts		0.65	0.35	1.04	0.15	-0.05	0.98	
<b>2020 New hypotheses</b>		How pushy		1.64	3.47**		0.30	2.25*
		Issue: BLM/Race		0.38	-0.94		1.98*	-1.29
	Issue: COVID-19		-2.97**	0.54		-0.90	-1.12	
	Issue: Decency		2.49*	-1.17		0.86	1.39	
	Messenger: Everyday people		0.06	1.61		0.42	0.60	
	Messenger: Healthcare worker		-1.41	1.68		-0.48	-0.16	
	Messenger: Republican		2.24*	0.44		2.19*	1.35	

**Figure DA23:** Estimated distribution of ATEs for Republican respondents





**Figure DA24:** *t*-statistics for all pre-registered meta-regressions, for Republican respondents

	Favorability			Vote choice			
	2018	2020 Downballot	2020 Presidential	2018	2020 Downballot	2020 Presidential	
2018 Primary hypotheses	Candidate facts	3.20**	1.06	-0.02	2.45*	1.08	-0.46
	New fact (where fact present)	-1.28	1.59	-0.59	0.47	0.09	0.98
	Policy facts	-0.33	0.18	0.09	1.26	-1.12	0.57
	Primary focus: Candidate	1.08	1.55	0.88	1.23	0.72	-0.37
	Primary focus: Issues	-0.13	0.11	1.91	0.89	-0.10	0.31
	Technique: Negative name-calling	0.72	0.74	0.50	-0.13	-1.53	-0.16
	Technique: Negative testimonial	0.93	0.71	-0.99	-0.86	1.42	-0.62
	Technique: Negative transfer of association	1.40	-0.91	0.68	0.82	-0.81	2.38*
	Technique: Plain folks	0.56	1.04	0.07	1.55	0.43	1.00
	Technique: Positive name-calling	1.23	0.46	-1.82	0.40	-0.17	-0.40
	Technique: Positive testimonial	1.43	-0.08	1.21	0.27	-0.34	0.11
	Technique: Positive transfer of association	0.40	-0.88	-0.67	-0.29	-0.11	-1.15
	2018 Secondary hypotheses	Cited fact (where fact present)	0.54	0.01	-0.96	1.56	-0.63
Emotion: Anger		0.17	0.08	-0.85	1.08	1.05	1.25
Emotion: Enthusiasm		0.50	0.20	-0.88	-1.10	0.21	-1.42
Explicit vote for		0.45	-1.10	-0.20	-0.58	-0.61	-0.08
Messenger: Female		0.36	0.02	1.13	-0.15	-0.87	0.22
Messenger: Politician		1.44	1.45	-0.66	-0.54	0.88	0.75
Primary tone: Contrast		-0.07	0.30	-1.25	0.10	-1.35	-0.09
Primary tone: Positive		0.28	-0.53	-0.40	-0.83	0.52	-1.34
Production value: High		2.16*	1.99*	0.31	2.19*	1.15	1.07
Specificity: Candidate facts		0.14	0.10	0.09	1.98	-0.30	0.17
Specificity: Policy facts		0.54	1.42	-0.71	0.55	0.30	0.15
2020 New hypotheses	How pushy		1.52	0.45		0.52	1.37
	Issue: BLM/Race		-0.03	-1.17		-0.74	-0.19
	Issue: COVID-19		-0.02	0.25		1.19	0.57
	Issue: Decency		2.46*	-0.59		0.59	0.02
	Messenger: Everyday people		0.19	0.72		0.66	-1.30
	Messenger: Healthcare worker		0.13	0.23		-0.11	0.86
	Messenger: Republican		-0.36	-0.16		0.81	-0.24

# DA 6 Balance check tables

Wald test	StartTime	Age	Male	HighSchool	SomeCollege	College	White	Black	Hispanic
0.012	0.029	0.061	0.755	0.228	0.237	0.065	0.044		
0.292	1.000	0.875	0.046	0.265	0.676	0.812	0.045	0.234	0.153
0.668	0.982	0.960	0.753	0.501	0.097	0.362	0.148	0.918	0.091
0.918	0.994	0.913	0.720	0.206	0.629	0.501	0.859	0.979	0.954
0.957	0.987	0.952	0.920	0.705	0.772	0.841	0.714	0.179	0.414
0.248	0.999	0.848	0.239	0.744	0.192	0.104	0.929	0.375	0.237
0.117	0.999	0.435	0.012	0.511	0.682	0.162	0.155	0.149	
<.001	0.993	0.033	0.987	<.001	0.023	0.476	0.639	0.373	0.451
0.772	0.978	0.692		0.562	0.904	0.628	0.466	0.406	0.997
0.448	0.983	0.530	0.134	0.345	0.985	0.458	0.488	0.920	0.426
0.453	0.984	0.252		0.739	0.057	0.056	0.702	0.600	0.595
0.103	1.000	0.465	0.999	0.395	0.749	0.212	0.215	0.532	0.035
0.974	0.996	0.630	0.296	0.538	0.422	0.551	0.992	0.651	0.769
0.306	1.000	0.915	0.447	0.707	0.235	0.257	0.838	0.766	0.705
0.141	1.000	0.409	0.998	0.723	0.399	0.888	0.693	0.216	0.353
0.196	0.980	0.083	0.659	0.024	0.414	0.391	0.064	0.106	0.310
0.487	0.881	0.564	0.218	0.050	0.013	0.671	0.880	0.571	0.709
0.889	1.000	0.992	0.650	0.957	0.771	0.618	0.047	0.415	0.491
0.721	0.956	0.543		0.758	0.408	0.260	0.126	0.459	0.033
0.014	1.000	0.426	0.891	0.442	0.757	0.082	0.483	0.311	0.781
0.454	0.997	0.375	0.880	0.669	0.755	0.512	0.222	0.008	
0.407	0.649	0.150	0.636	0.105	0.096	0.486	0.695	0.417	0.414
0.918	0.981	0.652		0.356	0.381	0.626	0.201	0.247	
0.995	0.999	0.697	0.886	0.927	0.753	0.800	0.736	0.601	0.983
0.258	0.923	0.815	0.916	0.518	0.023	0.012	0.357		0.464
0.744	0.845	0.455	0.391	0.842	0.833	0.717	0.395	0.146	0.751
0.575	0.922	0.253	0.231	0.865	0.701	0.354	0.232	0.292	0.837
0.602	0.975	0.717	0.741	0.393	0.914	0.196	0.556	0.705	0.637
0.120	0.994	0.087	0.701	0.037	0.387	0.190	0.877	0.832	0.588
0.540	1.000	0.672	0.955	0.253	0.337	0.982	0.897	0.590	0.616
<.001	0.999	0.592	0.647	0.973	0.691	0.792	0.467	0.404	0.987
0.893	1.000	0.334	0.882	0.797	0.839	0.912	0.868	0.966	0.538
0.385	0.994	0.540	0.894	0.030	0.053	0.948	0.419	0.866	0.306

**Table DA31:** Balance check p-values for 2018, All conditions. Each row is a study.

Wald test	StartTime	Age	Male	HighSchool	SomeCollege	College	White	Black	Hispanic
0.007	0.015	0.032	0.597	0.163	0.141	0.075	0.028		
0.137	1.000	0.787	0.049	0.194	0.630	0.974	0.023	0.148	0.110
0.709	0.927	0.689	0.456	0.160	0.357	0.250	0.584	0.903	0.897
0.929	0.972	0.852	0.821	0.594	0.625	0.913	0.910	0.600	0.271
0.646	0.994	0.670	0.205	0.560	0.205	0.075	0.897	0.877	0.594
0.141	0.986	0.284	0.009	0.404	0.480	0.604	0.083	0.080	
<.001	0.991	0.021	0.967	<.001	0.015	0.359	0.625	0.294	0.349
0.371	0.977	0.497		0.398	0.769	0.576	0.292	0.237	0.973
0.571	0.926	0.333	0.574	0.538	0.982	0.291	0.322	0.783	0.251
0.804	0.983	0.744		0.962	0.251	0.173	0.827	0.522	0.448
0.051	1.000	0.460	0.997	0.312	0.773	0.151	0.162	0.461	0.034
0.899	0.989	0.498	0.193	0.793	0.316	0.520	0.974	0.510	0.637
0.347	1.000	0.952	0.393	0.619	0.192	0.200	0.915	0.689	0.639
0.302	1.000	0.551	0.995	0.629	0.644	0.983	0.598	0.309	0.276
0.064	0.942	0.056	0.453	0.009	0.357	0.443	0.098	0.051	0.276
0.713	0.765	0.462	0.084	0.302	0.731	0.395	0.810	0.473	0.621

0.768	1.000	0.992	0.558	0.929	0.690	0.521	0.033	0.546	0.393
0.681	0.764	0.776		0.785	0.977	0.525	0.086	0.938	0.047
0.057	1.000	0.838	0.841	0.364	0.699	0.108	0.508	0.241	0.783
0.425	0.951	0.183	0.877	0.443	0.509	0.265	0.133	0.067	
0.286	0.360	0.114	0.352	0.237	0.038	0.992	0.394	0.961	0.492
0.881	0.992	0.839		0.544	0.190	0.418	0.803	0.456	
0.990	0.991	0.638	0.763	0.919	0.818	0.668	0.741	0.829	0.942
0.324	0.796	0.577	0.707	0.253	0.200	0.440	0.282		0.226
0.855	0.563	0.402	0.220	0.832	0.677	0.533	0.409	0.577	0.707
0.358	0.831	0.508	0.471	0.994	0.722	0.096	0.409	0.592	0.413
0.030	0.959	0.055	0.682	0.029	0.320	0.095	0.893	0.856	0.398
0.388	1.000	0.595	0.943	0.194	0.298	0.979	0.853	0.540	0.616
<.001	0.997	0.627	0.453	0.899	0.697	0.629	0.304	0.371	0.974
0.963	0.999	0.980	0.760	0.920	0.858	0.806	0.758	0.934	0.562
0.588	0.984	0.456	0.936	0.127	0.079	0.949	0.274	0.812	0.596

**Table DA32:** Balance check p-values for 2018, Without control group. Each row is a study.

Wald test	StartTime	Age	Male	HighSchool	SomeCollege	College	White	Black	Hispanic	TrumpApproval	Partisanship	Ideology
0.320	0.884	0.511	0.591	0.318	0.925	0.441	0.180	0.422	0.107			
0.510	0.977	0.848	0.385	0.984	0.650	0.222	0.006	0.209	0.131	0.213	0.566	0.821
0.230	0.757	0.615	0.292				0.032	0.816		0.189	0.748	0.309
0.553	1.000	0.113	0.379	0.577	0.380	0.283	0.792	0.535	0.085	0.548	0.596	0.756
0.554	0.360	0.994	0.109	0.791	0.361	0.373	0.040	0.038	0.265	0.545	0.684	0.639
0.293	0.934	0.310	0.210	0.053	0.200	0.258	0.218	0.318	0.248	0.716	0.967	0.865
0.553	1.000	0.874	0.362	0.777	0.939	0.168	0.137	0.423	0.262	0.421	0.410	0.261
0.879	0.999	0.478	0.573	0.868	0.558	0.978	0.295	0.632	0.708	0.980		0.358
0.333	0.993	0.331	0.737	0.590	0.441	0.951	0.220	0.171	0.028	0.080	0.264	0.040
0.889	0.987	0.954	0.940	0.549	0.567	0.508	0.367	0.383	0.840	0.055	0.251	0.810
0.114	0.078	0.316	0.991	0.166	0.276	0.078	0.272	0.022	0.467	0.490	0.329	0.228
0.818	0.999	0.491	0.787	0.228	0.233	0.417	0.510	0.694	0.736	0.363		0.494
0.965	1.000	0.392	0.857	0.615	0.143	0.217	0.905	0.496	0.765	0.319	0.925	0.651
0.560	0.986	0.961	0.059	0.502	0.933	0.489	0.043	0.107	0.124	0.740	0.657	0.288
0.833	0.827	0.363	0.789	0.655	0.663	0.950	0.464	0.098	0.386	0.785	0.640	0.580
0.309	0.999	0.371	0.783	0.337	0.048	0.711	0.320	0.411	0.765	0.452	0.546	0.113
0.982	0.999	0.900	0.779	0.463	0.406	0.414	0.646	0.780	0.801	0.992	0.756	0.700
0.378	0.987	0.259	0.805	0.045	0.131	0.128	0.175	0.458	0.189	0.751	0.783	0.631
0.710	1.000	0.381	0.511	0.547	0.832	0.560	0.860	0.468	0.328	0.061	0.070	0.122
0.961	0.992	0.623	0.696	0.476	0.963	0.085	0.470	0.984	0.713	0.534	0.623	0.556
0.765	0.996	0.448	0.857	0.953	0.725	0.590	0.707	0.269	0.128	0.658	0.586	0.298
0.052	0.999	0.663	0.410	0.065	0.054	0.761	0.940	0.039	0.083	0.987	0.284	0.196
0.100	0.995	0.059	0.482	0.869	0.722	0.021	0.610	0.821	0.435	0.402	0.091	0.006
0.454	0.971	0.194	0.365	0.726	0.663	0.657	0.476	0.129	0.037	0.872	0.511	0.842
0.964	0.939	0.728	0.432	0.885	0.364	0.013	0.901	0.992	0.960	0.938	0.727	0.992
0.776	0.966	0.989	0.708	0.331	0.093	0.119	0.700	0.823	0.119	0.358	0.929	0.345
0.616	0.868	0.782	0.562	0.964	0.024	0.405	0.461	0.195	0.907	0.779	0.254	0.298
0.985	0.998	0.708	0.864	0.322	0.275	0.907	0.454	0.396	0.894	0.850	0.988	0.949
0.127	0.052	0.738	0.508	0.118	0.596	0.602	0.304	0.147	0.244	0.119	0.534	0.728
0.366	0.994	0.204	0.521	0.704	0.991	0.758	0.243	0.319	0.492	0.069	0.072	0.185
0.455	0.788	0.713	0.091	0.645	0.016	0.386	0.598	0.770	0.465	0.941	0.743	0.700
0.479	0.986	0.257	0.076	0.499	0.636	0.674	0.495	0.628	0.218	0.672	0.994	0.504
0.675	0.952	0.408	0.745	0.372	0.351	0.262	0.951	0.571	0.495	0.192	0.559	0.650
0.527	0.691	0.073	0.727	0.880	0.719	0.125	0.901	0.879	0.213	0.768	0.307	0.191
0.241	0.934	0.515	0.622	0.722	0.498	0.888	0.110	0.968	0.068	0.208	0.051	0.093
0.894	0.987	0.216	0.721	0.817	0.653	0.684	0.590	0.856	0.804	0.957	0.452	0.972
0.871	1.000	0.877	0.804	0.900	0.908	0.569	0.249	0.755	0.447	0.247	0.483	0.025
0.572	0.991	0.176	0.290	0.097	0.821	0.948	0.109	0.763	0.130	0.139	0.359	0.160
0.959	0.941	0.992	0.880	0.219	0.823	0.155	0.483	0.197	0.547	0.386	0.825	0.528
0.993	0.988	0.989	0.496	0.976	0.587	0.774	0.815	0.956	0.185	0.410	0.547	0.357

0.897	0.909	0.403	0.297	0.311	0.459	0.275	0.953			0.512	0.280	0.485
0.885	0.526	0.787	0.706	0.361	0.517	0.254	0.188	0.516	0.193	0.541	0.547	0.729
0.889	0.977	0.937	0.519	0.832	0.386	0.827	0.194	0.790	0.740	0.608	0.116	0.120
0.409	0.960	0.451	0.974	0.282	0.319	0.418	0.471	0.586	0.035	0.760	0.901	0.351
0.533	0.756	0.446	0.755	0.849	0.325	0.549	0.381	0.199		0.371	0.653	0.322
0.721	0.475	0.273	0.652	0.247	0.647	0.754	0.257	0.950	0.447	0.547	0.861	0.874
0.258	0.942	0.434	0.787	0.063	0.723	0.710	0.510	0.446		0.006	0.035	0.100
0.163	0.951	0.309	0.063	0.605	0.139	0.519	0.326	0.602	0.665	0.062	0.205	0.616
0.337	0.985	0.178	0.852	0.048	0.883	0.517	0.563	0.554	0.495	0.127	0.703	0.010
0.560	0.967	0.084	0.622	0.375	0.298	0.314	0.611	0.636	0.529	0.920	0.518	0.821
0.637	0.743	0.524	0.148	0.242	0.140	0.427	0.198	0.726	0.092	0.664	0.605	0.390
0.998	1.000	0.964	0.688	0.955	0.878	0.863	0.978	0.587	0.041	0.795	0.821	0.610
0.435	0.960	0.758	0.205	0.325	0.079	0.358	0.378	0.752		0.048	0.047	0.015
0.554	0.978	0.307	0.062	0.506	0.394	0.907	0.406	0.379	0.791	0.440	0.590	0.605
0.552	0.871	0.776	0.758	0.042	0.953	0.438	0.889	0.075	0.837	0.910	0.420	0.313
0.406	0.855	0.215	0.405	0.130	0.740	0.047	0.700	0.413	0.823	0.214	0.607	0.134
0.584	0.632	0.215	0.934	0.164	0.522	0.181	0.680	0.720	0.047	0.870	0.941	0.119
0.853	0.713	0.877	0.321	0.176	0.958	0.994	0.917	0.720	0.948	0.439	0.108	0.520
0.926	1.000	0.925	0.282	0.360	0.600	0.912	0.647	0.600	0.085	0.905	0.352	0.356
0.648	0.987	0.964	0.816	0.837	0.344	0.250	0.514	0.307	0.129	0.852	0.335	0.245
0.486	0.928	0.259	0.463	0.612	0.443	0.477	0.349	0.898	0.941	0.632	0.021	0.773
0.949	0.973	0.229	0.484	0.725	0.430	0.779	0.664	0.610	0.860	0.450	0.437	0.343
0.187	0.382	0.285	0.539	0.001	0.428	0.075	0.158	0.107	0.593	0.392	0.735	0.660
0.168	0.790	0.138	0.853	0.331	0.923	0.989	0.016	0.085	0.014	0.043	0.285	0.997
0.971	0.736	0.379	0.716	0.382	0.397	0.756	0.879	0.770	0.261	0.452	0.304	0.552
0.440	0.988	0.562	0.875	0.866	0.666	0.679	0.396	0.771	0.159	0.127	0.415	0.512
0.941	0.980	0.440	0.878	0.902	0.299	0.166	0.979	0.470	0.446	0.531	0.984	0.704
0.731	0.963	0.571	0.414	0.573	0.228	0.594	0.106	0.301	0.956	0.180	0.081	0.154
0.932	0.988	0.212	0.934	0.612	0.361	0.673	0.746	0.556	0.152	0.732	0.962	0.859
0.871	0.885	0.247	0.638	0.583	0.207	0.423	0.466	0.399	0.392	0.989	0.881	0.904
0.981	0.941	0.677	0.793	0.905	0.401	0.724	0.631			0.952	0.351	0.357
0.889	0.902	0.936	0.994	0.750	0.892	0.727	0.063	0.767	0.933	0.706	0.261	0.540
0.374	0.992	0.721	0.015	0.855	0.075	0.276	0.578	0.079	0.362	0.663	0.524	0.096
0.501	0.740	0.342	0.178	0.314	0.930	0.774	0.436		0.759	0.566	0.928	0.221
0.165	0.676	0.252	0.553	0.528	0.579	0.500	0.134	0.012	0.990	0.374	0.106	0.106
0.452	0.991	0.035	0.408	0.386	0.665	0.612	0.135	0.180		0.104	0.019	0.437
0.836	0.928	0.646	0.378	0.321	0.898	0.274	0.588	0.760		0.265	0.747	0.307
0.291	0.968	0.939		0.005	0.111	0.289	0.711			0.577	0.599	0.563
0.001	0.976	<.001	0.658	0.699	0.180	0.202	0.698			0.009	0.006	0.531
0.591	0.787	0.743	0.371	0.520	0.420	0.053	0.081	0.815		0.705	0.356	0.658
0.195	0.996	0.042	0.020	0.419	0.795	0.956	0.761	0.023	0.100	0.997	0.623	0.614
0.963	0.978	0.817	0.444	0.220	0.454	0.932	0.622	0.936	0.296	0.981	0.835	0.710
0.491	1.000	0.982	0.716	0.374	0.055	0.635	0.082	0.029	0.280	0.908	0.464	0.766
0.995	0.875	0.975	0.535	0.338	0.948	0.688	0.783	0.770	0.531	0.890	0.745	0.621
0.789	0.875	0.657	0.938	0.816	0.890	0.569	0.232	0.358	0.649	0.532	0.936	0.903
0.508	0.909	0.575	0.546	0.345	0.812	0.563	0.157	0.378	0.097	0.316	0.296	0.142
0.068	0.326	0.035	0.715	0.100	0.012	0.189	0.366	0.367	0.363	0.847	0.528	0.210
0.530	0.707	0.707	0.327	0.105	0.411	0.213	0.084	0.580	0.877	0.577	0.270	0.534
0.505	0.773	0.051	0.808	0.259	0.364	0.424	0.014	0.072	0.287	0.667	0.719	0.894
0.143	0.909	0.869	0.949	0.365	0.340	0.107	0.032	0.675	0.387	0.140	0.089	0.112
0.871	0.952	0.778	0.374	0.581	0.673	0.205	0.425	0.652	0.717	0.977	0.671	0.353
0.790	0.995	0.120	0.912	0.305	0.239	0.744	0.599	0.695		0.705	0.607	0.459
0.524	0.965	0.396	0.799	0.083	0.796	0.018	0.663	0.531	0.286	0.986	0.616	0.505
0.778	0.825	0.564	0.484	0.687	0.030	0.824	0.553			0.993	0.727	0.744
0.219	0.806	0.565	0.285	0.021	0.532	0.848	0.234	0.154	0.344	0.253	0.110	0.021
0.319	0.765	0.253	0.909	0.175	0.661	0.514	0.481	0.012	0.147	0.160	0.235	0.544
0.917	0.981	0.670	0.391	0.352	0.166	0.232	0.640	0.764	0.614	0.379	0.736	0.392
0.325	0.520	0.809	0.025	0.838	0.331	0.417	0.401	0.822	0.265	0.542	0.508	0.246
0.737	0.989	0.242	0.315	0.510	0.285	0.543	0.410	0.329	0.302	0.515	0.500	0.308
0.195	0.698	0.081	0.042	0.992	0.135	0.154	0.545	0.946	0.194	0.851	0.942	0.435
0.320	0.573	0.100	0.715	0.640	0.370	0.394	0.555	0.113	0.440	0.788	0.369	0.787
0.299	0.560	0.885	0.052	0.393	0.994	0.548	0.873	0.928	0.036	0.703	0.432	0.469
0.340	0.858	0.397	0.190	0.449	0.711	0.611	0.041	0.022	0.933		0.686	0.922
0.788	0.792	0.937	0.572	0.376	0.584	0.553	0.105	0.074	0.387		0.414	0.486
0.748	0.940	0.927	0.669	0.059	0.494	0.264	0.395	0.693	0.832		0.319	0.510
0.753	0.907	0.548	0.999	0.504	0.898	0.299	0.430	0.373	0.972		0.238	0.171
0.983	0.964	0.420	0.910	0.998	0.717	0.379	0.545	0.535	0.668		0.950	0.995
0.306	0.256	0.961	0.015	0.245	0.737	0.676	0.319	0.136	0.703		0.828	0.239

0.918	0.848	0.338	0.606	0.898	0.600	0.469	0.311	0.666	0.598		0.494	0.163
0.550	0.408	0.477	0.222	0.986	0.812	0.199	0.560	0.899	0.772		0.994	0.720
0.603	0.682	0.867	0.230	0.179	0.945	0.121	0.792	0.301	0.602		0.305	0.356
0.659	0.952	0.601	0.197	0.915	0.477	0.255	0.721	0.197	0.316		0.661	0.474
0.786	0.812	0.562	0.798	0.684	0.466	0.490	0.665	0.932	0.706		0.280	0.218

**Table DA33:** Balance check p-values for 2020, All conditions. Each row is a study.

Wald test	StartTime	Age	Male	HighSchool	SomeCollege	College	White	Black	Hispanic	TrumpApproval	Partisanship	Ideology
0.802	0.893	0.316	0.709	0.207	0.901	0.335	0.632	0.474	0.589			
0.470	0.904	0.795	0.932	0.941	0.498	0.119	0.005	0.790	0.061	0.126	0.376	0.637
0.426	0.990	0.527	0.167				0.063	0.645		0.614	0.562	0.744
0.382	1.000	0.074	0.333	0.504	0.285	0.260	0.714	0.614	0.061	0.555	0.655	0.658
0.515	0.207	0.962	0.682	0.600	0.436	0.210	0.027	0.019	0.198	0.892	0.776	0.592
0.486	0.842	0.261	0.836	0.514	0.101	0.706	0.973	0.591	0.504	0.569	0.879	0.693
0.585	0.999	0.812	0.340	0.732	0.895	0.110	0.379	0.316	0.683	0.789	0.765	0.205
0.790	0.998	0.352	0.664	0.838	0.622	0.955	0.295	0.516	0.581	0.958		0.419
0.184	0.972	0.381	0.684	0.431	0.290	0.890	0.140	0.137	0.054	0.043	0.164	0.020
0.756	0.983	0.966	0.864	0.462	0.406	0.612	0.734	0.471	0.906	0.027	0.146	0.667
0.785	0.907	0.150	0.913	0.264	0.221	0.722	0.279	0.595	0.219	0.516	0.350	0.161
0.736	0.998	0.391	0.727	0.149	0.170	0.301	0.608	0.675	0.627	0.303		0.420
0.963	0.998	0.500	0.774	0.508	0.145	0.172	0.888	0.389	0.787	0.292	0.914	0.555
0.345	0.945	0.974	0.041	0.340	0.864	0.428	0.192	0.312	0.092	0.538	0.466	0.168
0.545	0.809	0.166	0.848	0.649	0.368	0.778	0.215	0.031	0.444	0.728	0.397	0.419
0.520	0.996	0.737	0.902	0.566	0.616	0.959	0.263	0.430	0.678	0.444	0.450	0.084
0.957	0.999	0.820	0.811	0.626	0.293	0.453	0.577	0.928	0.699	0.990	0.644	0.583
0.511	0.933	0.319	0.627	0.036	0.083	0.270	0.085	0.371	0.195	0.672	0.726	0.659
0.610	1.000	0.360	0.424	0.570	0.967	0.630	0.855	0.407	0.254	0.041	0.047	0.096
0.915	0.989	0.524	0.652	0.374	0.945	0.053	0.428	0.965	0.652	0.478	0.606	0.905
0.548	0.982	0.316	0.766	0.877	0.921	0.557	0.553	0.172	0.083	0.503	0.641	0.187
0.144	0.998	0.536	0.751	0.055	0.436	0.658	0.870	0.024	0.397	0.971	0.213	0.119
0.122	0.998	0.160	0.392	0.899	0.991	0.114	0.680	0.911	0.394	0.301	0.076	0.005
0.320	0.940	0.249	0.482	0.603	0.534	0.786	0.584	0.088	0.022	0.814	0.453	0.881
0.914	0.880	0.652	0.343	0.909	0.295	0.006	0.812	0.980	0.909	0.931	0.844	0.978
0.703	0.930	0.981	0.689	0.226	0.149	0.131	0.588	0.869	0.094	0.540	0.899	0.311
0.898	0.778	0.756	0.879	0.845	0.302	0.300	0.223	0.078	0.689	0.930	0.991	0.814
0.950	1.000	0.609	0.734	0.672	0.206	0.803	0.509	0.474	0.793	0.716	0.955	0.934
0.622	0.979	0.767	0.534	0.113	0.551	0.598	0.723	0.117	0.962	0.133	0.443	0.642
0.673	0.976	0.184	0.902	0.519	0.962	0.907	0.507	0.219	0.981	0.213	0.998	0.921
0.398	0.644	0.722	0.444	0.478	0.009	0.410	0.431	0.936	0.357	0.868	0.581	0.565
0.365	0.942	0.383	0.048	0.373	0.512	0.988	0.432	0.957	0.109	0.487	0.973	0.528
0.363	0.969	0.468	0.611	0.211	0.387	0.145	0.987	0.422	0.304	0.182	0.846	0.946
0.786	0.614	0.364	0.532	0.716	0.740	0.616	0.787	0.742	0.275	0.747	0.188	0.205
0.577	0.823	0.671	0.643	0.529	0.341	0.728	0.110	0.887	0.469	0.153	0.358	0.076
0.625	0.940	0.241	0.569	0.648	0.710	0.475	0.665	0.686	0.808	0.860	0.282	0.936
0.846	0.999	0.813	0.694	0.820	0.844	0.734	0.549	0.642	0.451	0.163	0.407	0.016
0.424	0.950	0.086	0.156	0.057	0.779	0.878	0.729	0.629	0.196	0.086	0.201	0.090
0.969	0.958	0.974	0.812	0.140	0.817	0.103	0.715	0.836	0.404	0.678	0.836	0.400
0.999	0.975	0.975	0.900	0.957	0.492	0.866	0.880	0.920	0.371	0.318	0.822	0.571
0.930	0.946	0.854	0.401	0.324	0.674	0.168	0.921			0.419	0.286	0.569
0.651	0.838	0.968	0.564	0.207	0.329	0.140	0.199	0.357	0.153	0.742	0.829	0.706
0.812	0.931	0.883	0.495	0.694	0.897	0.927	0.109	0.722	0.581	0.538	0.060	0.083
0.364	0.968	0.914	0.898	0.356	0.174	0.505	0.417	0.404	0.029	0.684	0.749	0.510
0.906	0.744	0.816	0.996	0.691	0.898	0.278	0.513	0.925		0.307	0.534	0.142
0.538	0.612	0.154	0.480	0.130	0.479	0.563	0.475	0.924	0.514	0.388	0.806	0.891
0.216	0.856	0.479	0.654	0.069	0.729	0.581	0.455	0.668		0.003	0.025	0.052
0.079	0.889	0.283	0.031	0.899	0.075	0.385	0.315	0.534	0.620	0.061	0.117	0.503
0.082	0.928	0.107	0.810	0.031	0.827	0.331	0.523	0.354	0.381	0.061	0.652	0.004
0.633	0.956	0.056	0.519	0.484	0.199	0.255	0.900	0.595	0.455	0.931	0.489	0.708
0.292	0.646	0.333	0.111	0.409	0.085	0.251	0.106	0.526	0.044	0.455	0.438	0.228
0.990	1.000	0.935	0.589	0.941	0.840	0.787	0.965	0.676	0.067	0.705	0.735	0.506
0.544	0.876	0.791	0.119	0.755	0.368	0.203	0.346	0.853		0.171	0.128	0.029

0.842	0.931	0.768	0.284	0.964	0.917	0.959	0.234	0.215	0.626	0.614	0.700	0.456
0.892	0.605	0.917	0.756	0.535	0.981	0.651	0.646	0.993	0.895	0.981	0.192	0.135
0.357	0.435	0.116	0.847	0.223	0.352	0.228	0.878	0.518	0.027	0.703	0.820	0.122
0.919	0.999	0.901	0.211	0.748	0.907	0.854	0.711	0.615	0.056	0.845	0.263	0.266
0.798	0.957	0.997	0.796	0.712	0.663	0.673	0.810	0.206	0.075	0.963	0.351	0.297
0.279	0.924	0.204	0.735	0.616	0.321	0.342	0.252	0.890	0.970	0.512	0.010	0.668
0.929	0.972	0.214	0.395	0.699	0.389	0.701	0.911	0.507	0.846	0.539	0.572	0.731
0.077	0.244	0.191	0.416	0.002	0.279	0.125	0.118	0.072	0.424	0.332	0.572	0.595
0.132	0.662	0.119	0.822	0.970	0.848	0.999	0.008	0.164	0.006	0.044	0.232	0.990
0.295	0.955	0.427	0.748	0.759	0.503	0.598	0.284	0.709	0.109	0.078	0.996	0.370
0.893	0.966	0.483	0.823	0.839	0.467	0.128	0.965	0.395	0.361	0.441	0.987	0.698
0.520	0.944	0.446	0.400	0.678	0.878	0.470	0.048	0.164	0.980	0.102	0.067	0.083
0.898	0.955	0.263	0.870	0.449	0.323	0.541	0.613	0.472	0.628	0.569	0.950	0.827
0.841	0.950	0.127	0.455	0.963	0.254	0.264	0.519	0.270	0.509	0.973	0.753	0.898
0.872	0.852	0.846	0.798	0.778	0.242	0.586	0.603			0.852	0.220	0.212
0.881	0.845	0.978	0.996	0.570	0.931	0.778	0.118	0.696	0.819	0.992	0.137	0.349
0.309	0.985	0.581	0.007	0.746	0.041	0.219	0.536	0.049	0.507	0.615	0.502	0.059
0.943	0.519	0.276	0.658	0.328	0.708	0.561	0.497		0.471	0.339	0.999	0.344
0.329	0.626	0.545	0.279	0.440	0.321	0.734	0.431	0.125	0.956	0.325	0.035	0.230
0.835	0.881	0.487	0.833	0.225	0.866	0.216	0.421	0.602		0.158	0.854	0.591
0.385	0.846	0.096	0.857	0.789	0.324	0.074	0.925			0.630	0.888	0.364
0.390	0.690	0.710	0.348	0.387	0.317	0.047	0.069	0.792		0.701	0.400	0.516
0.665	0.989	0.614	0.501	0.439	0.736	0.909	0.820	0.020	0.067	0.991	0.498	0.544
0.810	0.911	0.859	0.333	0.110	0.293	0.874	0.954	0.965	0.158	0.924	0.686	0.548
0.383	1.000	0.977	0.681	0.291	0.035	0.619	0.055	0.027	0.516	0.901	0.481	0.747
0.977	0.792	0.924	0.589	0.243	0.903	0.576	0.704	0.647	0.731	0.867	0.673	0.461
0.708	0.844	0.767	0.883	0.703	0.762	0.365	0.139	0.368	0.653	0.511	0.931	0.783
0.469	0.780	0.551	0.351	0.256	0.684	0.757	0.152	0.487	0.118	0.187	0.196	0.067
0.057	0.592	0.023	0.603	0.060	0.017	0.130	0.264	0.341	0.299	0.871	0.797	0.417
0.366	0.829	0.544	0.211	0.082	0.279	0.132	0.075	0.429	0.948	0.747	0.182	0.465
0.551	0.890	0.081	0.730	0.249	0.446	0.666	0.039	0.127	0.204	0.586	0.619	0.802
0.333	0.926	0.789	0.957	0.431	0.657	0.049	0.957	0.918	0.795	0.144	0.526	0.412
0.792	0.955	0.675	0.317	0.603	0.558	0.161	0.687	0.750	0.646	0.994	0.665	0.453
0.767	0.988	0.069	0.851	0.263	0.406	0.719	0.469	0.559		0.592	0.469	0.590
0.650	0.987	0.402	0.933	0.253	0.794	0.102	0.771	0.478	0.210	0.972	0.516	0.504
0.776	0.641	0.521	0.875	0.481	0.087	0.657	0.433			0.973	0.801	0.653
0.139	0.811	0.438	0.272	0.013	0.622	0.889	0.159	0.130	0.473	0.341	0.079	0.013
0.610	0.909	0.174	0.844	0.119	0.891	0.820	0.845	0.308	0.097	0.111	0.160	0.489
0.774	0.959	0.597	0.280	0.282	0.104	0.152	0.534	0.706	0.663	0.427	0.858	0.445
0.511	0.610	0.761	0.081	0.748	0.232	0.582	0.449	0.976	0.228	0.428	0.383	0.266
0.812	0.985	0.163	0.379	0.444	0.678	0.439	0.714	0.336	0.452	0.596	0.886	0.715
0.208	0.723	0.045	0.090	0.975	0.147	0.092	0.613	0.884	0.564	0.849	0.883	0.337
0.119	0.568	0.057	0.604	0.509	0.278	0.271	0.477	0.065	0.317	0.711	0.297	0.677
0.326	0.408	0.857	0.039	0.300	0.973	0.711	0.979	0.992	0.068	0.795	0.283	0.335
0.183	0.904	0.288	0.140	0.333	0.644	0.445	0.025	0.010	0.855	0.994	0.709	0.878
0.682	0.639	0.904	0.421	0.264	0.420	0.474	0.056	0.047	0.931		0.302	0.372
0.705	0.974	0.922	0.675	0.087	0.627	0.189	0.523	0.702	0.754		0.361	0.550
0.460	0.831	0.435	0.996	0.423	0.872	0.226	0.379	0.280	0.993		0.166	0.109
0.899	0.904	0.273	0.980	0.989	0.579	0.266	0.425	0.419	0.601		0.876	0.980
0.196	0.247	0.946	0.005	0.132	0.734	0.591	0.708	0.250	0.506		0.965	0.457
0.806	0.779	0.494	0.524	0.828	0.439	0.348	0.256	0.735	0.439		0.335	0.090
0.261	0.919	0.480	0.105	0.915	0.524	0.074	0.515	0.705	0.761		0.963	0.441
0.535	0.762	0.828	0.423	0.101	0.907	0.073	0.639	0.305	0.662		0.231	0.552
0.538	0.918	0.498	0.738	0.991	0.274	0.100	0.628	0.075	0.217		0.617	0.533
0.672	0.901	0.402	0.795	0.624	0.275	0.492	0.367	0.722	0.408		0.166	0.909

**Table DA34:** Balance check p-values for 2020, Without control group. Each row is a study.

## DA 7 Reliability table

**Table DA35:** Table of reliability of ratings for all video features used in the analysis.

Term name	Estimate	Lower 0.95	Upper 0.95	Year	Group
Policy facts	0.68	0.59	0.75	2018	primary
Candidate facts	0.60	0.50	0.69	2018	primary
Primary focus: Candidate	0.74	0.67	0.79	2018	primary
Primary focus: Issues	0.76	0.70	0.81	2018	primary
Technique: Negative name-calling	0.61	0.51	0.70	2018	primary
Technique: Positive name-calling	0.08	-0.17	0.28	2018	primary
Technique: Positive transfer of association	0.62	0.52	0.70	2018	primary
Technique: Negative transfer of association	0.69	0.61	0.76	2018	primary
Technique: Positive testimonial	0.83	0.78	0.86	2018	primary
Technique: Negative testimonial	0.69	0.61	0.76	2018	primary
Technique: Plain folks	0.58	0.47	0.67	2018	primary
Specificity: Policy facts	0.54	0.36	0.67	2018	secondary
Specificity: Candidate facts	0.34	-0.06	0.58	2018	secondary
New fact (where fact present)	0.59	0.47	0.69	2018	primary
Cited fact (where fact present)	0.74	0.66	0.80	2018	secondary
Emotion: Anger	0.26	0.06	0.42	2018	secondary
Emotion: Enthusiasm	0.76	0.70	0.81	2018	secondary
Messenger: Female	0.96	0.94	0.97	2018	secondary
Messenger: Politician	0.93	0.91	0.95	2018	secondary
Explicit vote for	0.73	0.66	0.79	2018	secondary
Primary tone: Positive	0.90	0.87	0.92	2018	secondary
Primary tone: Contrast	0.83	0.79	0.87	2018	secondary
Production value: High	0.78	0.72	0.83	2018	secondary
Candidate facts	0.57	0.48	0.64	2020	primary
How pushy	0.53	0.44	0.61	2020	new
Specificity: Candidate facts	0.51	0.32	0.64	2020	secondary
Specificity: Policy facts	0.36	0.16	0.50	2020	secondary
Policy facts	0.66	0.60	0.72	2020	primary
Primary focus: Candidate	0.62	0.55	0.68	2020	primary
Primary focus: Issues	0.71	0.65	0.75	2020	primary
Technique: Negative name-calling	0.55	0.47	0.63	2020	primary
Technique: Positive name-calling	0.34	0.22	0.45	2020	primary
Technique: Positive transfer of association	0.44	0.33	0.53	2020	primary
Technique: Negative transfer of association	0.48	0.38	0.56	2020	primary
Technique: Positive testimonial	0.74	0.69	0.78	2020	primary
Technique: Negative testimonial	0.80	0.76	0.83	2020	primary
Technique: Plain folks	0.23	0.08	0.35	2020	primary
New fact (where fact present)	0.48	0.36	0.58	2020	primary
Cited fact (where fact present)	0.67	0.60	0.73	2020	secondary
Emotion: Anger	0.46	0.36	0.55	2020	secondary
Emotion: Enthusiasm	0.80	0.77	0.84	2020	secondary
Messenger: Female	0.94	0.93	0.95	2020	secondary
Messenger: Politician	0.85	0.82	0.87	2020	secondary
Messenger: Everyday people	0.75	0.70	0.79	2020	new
Messenger: Republican	0.81	0.77	0.84	2020	new
Messenger: Healthcare worker	0.88	0.86	0.90	2020	new
Explicit vote for	0.62	0.55	0.68	2020	secondary
Primary tone: Positive	0.93	0.92	0.94	2020	secondary
Primary tone: Contrast	0.75	0.70	0.79	2020	secondary
Issue: BLM/Race	0.83	0.80	0.86	2020	new
Issue: COVID-19	0.89	0.87	0.91	2020	new
Issue: Decency	0.73	0.67	0.77	2020	new
Production value: High	0.56	0.47	0.63	2020	secondary

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